DC Inverter Wall Mounted

Models: M5WMX 010 GR
M5WMX 015 GR
M5WMX 020 GR
M5WMX 025 GR

McQuay Air Conditioning

Engineered for flexibility and performance.™

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Note : Installation and maintenance are to be performed only by qualified personnel who are familiar with local codes and regulations, and experienced with this type of equipment.

Caution: Sharp edges and coil surfaces are a potential injury hazard. Avoid contact with them.

Warning : Moving machinery and electrical power hazard. May cause severe personal injury or death. Disconnect and lock off power before servicing equipment.

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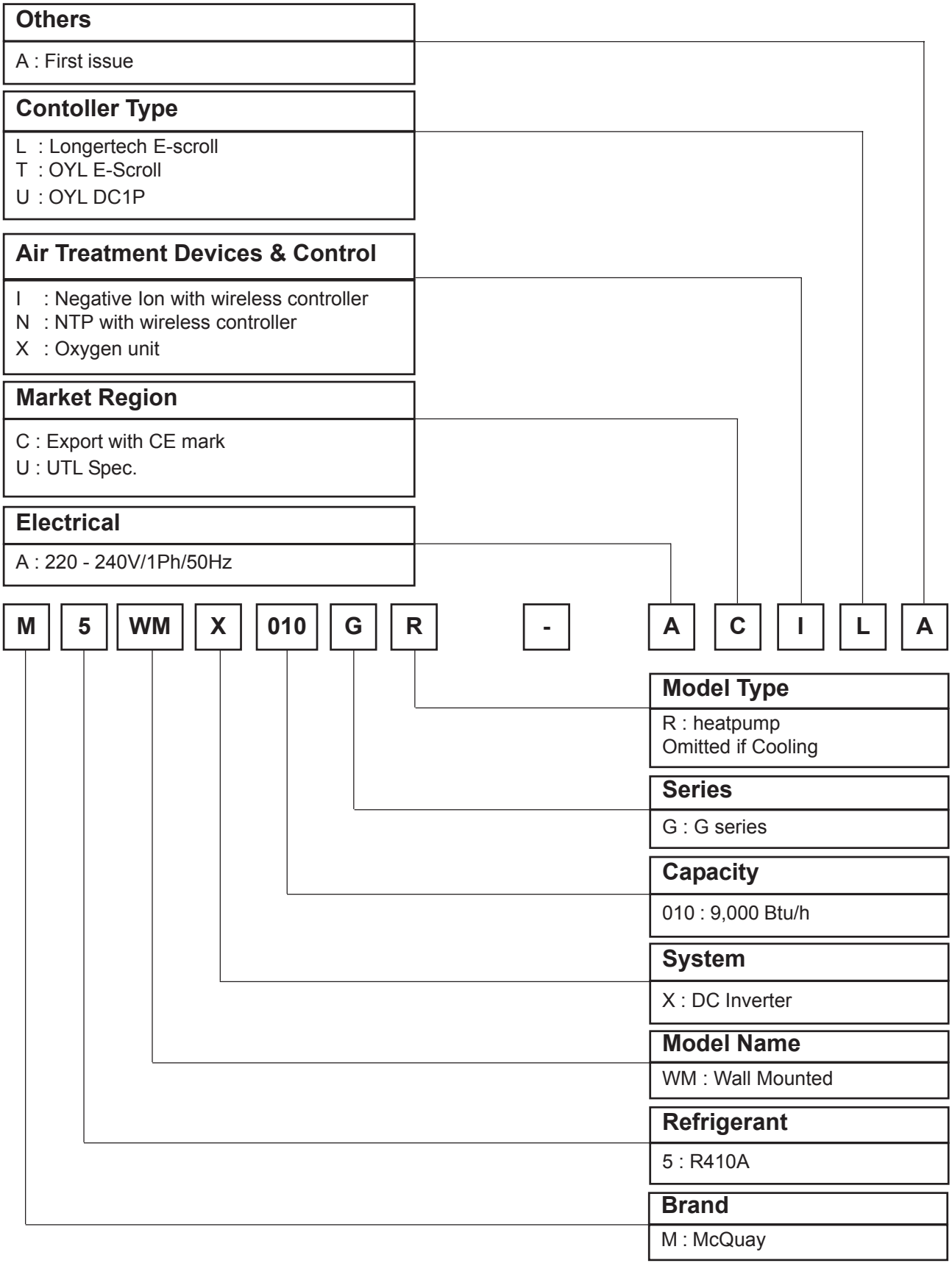
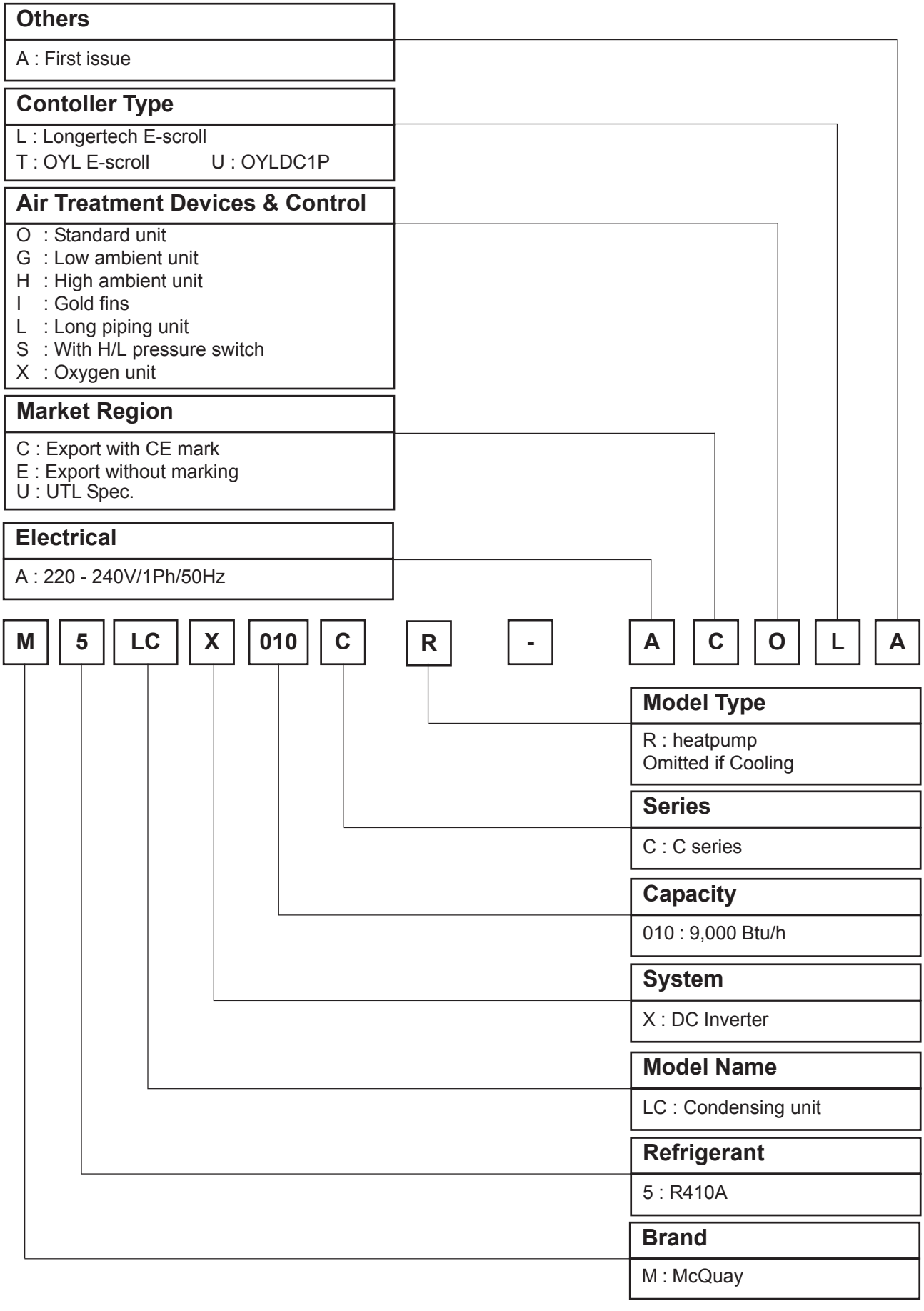
Bulletin illustrations cover the general appearance of McQuay International products at the time of publication.
We reserve the right to change design and construction specifications at any time without notice.

Nomenclature

Indoor



Outdoor


Others
A : First issue
Contoller Type
L : Longertech E-scroll
T : OYL E-scroll U : OYLDC1P
Air Treatment Devices & Control
O : Standard unit
G : Low ambient unit
H : High ambient unit
I : Gold fins
L : Long piping unit
S : With H/L pressure switch
X : Oxygen unit
Market Region
C : Export with CE mark
E : Export without marking
U : UTL Spec.
Electrical
A : 220 - 240V/1Ph/50Hz
M 5 LC X 010 C R - A C O L A
Model Type
R : heatpump
Omitted if Cooling
Series
C : C series
Capacity
010 : 9,000 Btu/h
System
X : DC Inverter
Model Name
LC : Condensing unit
Refrigerant
5 : R410A
Brand
M : McQuay

Features

Energy Saving
Total energy saved can be as high as 30% compared to the conventionally controlled units.

Efficient
McQuay DC Inverter series achieve excellent efficient with high EER & COP rating.

Comfortable
Users enjoy better comfort and quietness with inverter technology. When the environmental factors, such as temperature, humidity, airflow and/or outside ambient conditions, are obtained and processed through a control algorithm, the compressor motor speed can be varied to optimize the cooling power to create a more precisely controlled room temperature (i.e. less temperature fluctuation).

R410A Refrigerant (New)
Introducing the new type of refrigerant - R410A which is environmental friendly with Zero Ozone Depletion Potential (ODP = 0). R410A also provides the higher volumetric capacity and better refrigerating effect per unit of volume.

Advance Technology
The traditional conventional air conditioners repeat "the start" and "the stop" during the thermostat cycle off and causes the room temperature to be unstable. Incorporating fuzzy logic control into the McQuay Inverter design enables greater flexibility in handling the system control.
This result in:

- Powerful, efficient and economical operation.
- Even room temperature control.
- Constant and quiet compressor operation.
- Enhanced system reliability and reduced maintenance costs.

Self Diagnostic
Both indoor and outdoor LED Error Code Indicator helps to simplify the trouble shooting process. Where there's fault detected during operation, the defect code will be to indicate the faults.

Wireless Remote Control

- The compact LCD transmitter is able to operate the air conditioner unit within the distance of 9 meters.
- Fan motor speed can be set at low / medium / high or automatic.
- Sleep mode automatically increase set temperature since room temperature is lower at night thus achieving comfort surrounding.
- Airflow direction can be controlled automatically.
- Room temperature is controlled by electronic thermostat.
- The unit can be preset to on and off automatically for maximum of 15 hours by using timer on/off.
- Introducing turbo mode, which allows inverter compressor operates at high power and maximum speed to achieve required temperature quickly.

Product Line-Up

M5WMX Product line-up

M5WMX		Nomenclature	Classification								
			Handset	Control Module	Air Purification					Auto Restart	Marking
			G12	LJID 1.0	Ionizer Filter	Negative Ion	Anti-Microbial Filter	Air Filter (Titanium Oxide)	Non-Thermal Plasma (NTP)	CE	
Heat Pump Model	010GR	ACILA	X	X	X	X	X	X		X	X
		ACNLA	X	X	X		X	X	X	X	X
	015GR	ACILA	X	X	X	X	X	X		X	X
		ACNLA	X	X	X		X	X	X	X	X
	020GR	ACILA	X	X	X	X	X	X		X	X
		ACNLA	X	X	X		X	X	X	X	X
	025GR	ACILA	X	X	X	X	X	X		X	X
		ACNLA	X	X	X		X	X	X	X	X

M5LCX Product line-up

M5LCX		Nomenclature	Classification								
			Refrigerant Control		Printed Circuit Board		Compressor		Marking	Fin	
			Capillary Tube	Electronic Expansion Device	DC Inverter (LJ DSCAA)	VB 2.0 (Inverter)	Scroll	Rotary	CE	Hydrophilic Fin	Gold Fin
Heat Pump Model	010CR	ACOLA	X		X		X		X	X	
		ACOTA	X			X	X		X	X	
		ACILA	X		X		X		X		X
		ACITA	X			X	X		X		X
		ACOUA	X			X		X	X	X	
	015CR	ACOLA	X		X		X		X	X	
		ACOTA	X			X	X		X	X	
		ACILA	X		X		X		X		X
		ACITA	X			X	X		X		X
		ACOUA	X			X		X	X	X	
	020CR	ACOLA		X	X		X		X	X	
		ACILA		X	X		X		X		X
	025CR	ACOLA		X	X		X		X	X	
		ACILA		X	X		X		X		X

Specifications

General Data

MODEL		INDOOR UNIT			M5WMX 010GR	M5WMX 015GR
		OUTDOOR UNIT			M5LCX 010CR	M5LCX 015CR
NOMINAL COOLING CAPACITY				Btu/h	9,000 (3,700 - 12,000)	12,000 (3,700 - 15,000)
				W	2,638 (1,084 - 3,517)	3,517 (1,084 - 4,396)
NOMINAL HEATING CAPACITY				Btu/h	11,500 (4,000 - 15,000)	14,000 (4,000 - 17,000)
				W	3,370 (1,172 - 4,980)	4,103 (1,172 - 4,982)
NOMINAL TOTAL INPUT POWER (COOLING)				W	780 (300 - 1,100)	1,095 (300 - 1,780)
NOMINAL TOTAL INPUT POWER (HEATING)				W	980 (290 - 1,680)	1,270 (290 - 1,950)
NOMINAL RUNNING CURRENT (COOLING)				A	3.8	5.4
NOMINAL RUNNING CURRENT (HEATING)				A	4.8	6.3
POWER SOURCE				V/Ph/Hz	220-240/1/50	
REFRIGERANT TYPE					R410A	
INDOOR UNIT	CONTROL	AIR DISCHARGE			LOUVER (UP & DOWN) & GRILLE (LEFT & RIGHT)	
		OPERATION			WIRELESS LCD REMOTE CONTROL	
	AIR FLOW	HIGH		CFM / L/s	300 / 142	330 / 156
		MEDIUM		CFM / L/s	250 / 118	260 / 123
		LOW		CFM / L/s	200 / 94	210 / 99
	SOUND PRESSURE (H/M/L)			dBA	38 / 35 / 30	39 / 36 / 31
	UNIT DIMENSION	HEIGHT		mm/in	260.0 / 10.2	
		WIDTH		mm/in	899.0 / 35.4	
		DEPTH		mm/in	198.0 / 7.8	
	PACKING DIMENSION	HEIGHT		mm/in	337.0 / 13.3	
		WIDTH		mm/in	957.0 / 37.7	
		DEPTH		mm/in	270.0 / 10.6	
	UNIT WEIGHT			kg/lb	9.5 / 21.0	
	CONDENSATE DRAIN SIZE			mm/in	16.0 / 0.63	
OUTDOOR UNIT	AIR FLOW			CFM / L/s	800 / 378	900 / 425
	SOUND PRESSURE			dBA	47	52
	UNIT DIMENSION	HEIGHT		mm/in	540 / 21.3	
		WIDTH		mm/in	700 (+70) / 27.6 (+2.8)	
		DEPTH		mm/in	250 / 9.8	
	PACKING DIMENSION	HEIGHT		mm/in	601 / 23.7	
		WIDTH		mm/in	803 / 31.6	
		DEPTH		mm/in	320 / 12.6	
	UNIT WEIGHT			kg/lb	38 / 84	
	PIPE CONNECTION	TYPE			FLARE	
		SIZE	LIQUID	mm/in	6.35 / ¼	6.35 / ¼
			GAS	mm/in	9.52 / 3/8	12.7 / ½
	REFRIGERANT CHARGE			kg/lb	0.89 / 1.87	0.90 / 1.98

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - 27°C DB / 19°C WB INDOOR AND 35°C DB / 24°C WB OUTDOOR
b) HEATING - 20°C DB INDOOR AND 7°C DB / 6°C WB OUTDOOR
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.
5) ALL SPECIFICATION ARE TENTATIVE SPECIFICATION AT THE TIME OF PRINTING. PLEASE CONSULT YOUR DEALER FOR CONFIRMATION.
6) SOUND SPECTRUM FOR MWMX010GR / MWMX015GR IS NOT AVAILABLE AT THE TIME OF PRINTING

General Data

MODEL		INDOOR UNIT			M5WMX 020GR	M5WMX 025GR
		OUTDOOR UNIT			M5LCX 020CR	M5LCX 025CR
NOMINAL COOLING CAPACITY				Btu/h	18,000 (5,000 - 20,000)	21,000 (5,000 - 23,000)
				W	5,275 (1,465 - 5,862)	6,155 (1,465 - 6,741)
NOMINAL HEATING CAPACITY				Btu/h	19,000 (5,000 - 22,000)	22,000 (5,000 - 25,000)
				W	5,568 (1,465 - 6,155)	6,448 (1,465 - 7,034)
NOMINAL TOTAL INPUT POWER (COOLING)				W	1,636	2,150
NOMINAL TOTAL INPUT POWER (HEATING)				W	1,652	2,200
NOMINAL RUNNING CURRENT (COOLING)				A	7.9	11.3
NOMINAL RUNNING CURRENT (HEATING)				A	8.0	11.8
POWER SOURCE				V/Ph/Hz	220-240 / 1 / 50	
REFRIGERANT TYPE					R410A	
INDOOR UNIT	CONTROL	AIR DISCHARGE			LOUVER (UP & DOWN) & GRILLE (LEFT & RIGHT)	
		OPERATION			WIRELESS LCD REMOTE CONTROL	
	AIR FLOW	HIGH		CFM / L/s	550 / 260	630 / 297
		MEDIUM		CFM / L/s	440 / 208	500 / 236
		LOW		CFM / L/s	370 / 175	420 / 198
	SOUND PRESSURE (H/M/L)			dBA	44 / 40 / 35	49 / 43 / 40
	UNIT DIMENSION	HEIGHT		mm/in	304.0 / 12.0	
		WIDTH		mm/in	1062.0 / 41.8	
		DEPTH		mm/in	220.0 / 8.7	
	PACKING DIMENSION	HEIGHT		mm/in	378.0 / 14.9	
		WIDTH		mm/in	1130.0 / 44.5	
		DEPTH		mm/in	292.0 11.5	
	UNIT WEIGHT			kg/lb	15.0 / 33.1	
	CONDENSATE DRAIN SIZE			mm/in	20.0 / 0.79	
OUTDOOR UNIT	AIR FLOW			CFM / L/s	1500 / 708	1600 / 755
	SOUND PRESSURE			dBA	53	56
	UNIT DIMENSION	HEIGHT		mm/in	654 / 25.7	757 / 6.7
		WIDTH		mm/in	855 (+70) / 33.7 (+2.7)	
		DEPTH		mm/in	328 / 12.9	
	PACKING DIMENSION	HEIGHT		mm/in	785 / 30.9	
		WIDTH		mm/in	983 / 38.7	
		DEPTH		mm/in	405 / 15.9	
	UNIT WEIGHT			kg/lb	50 / 110	
	PIPE CONNECTION	TYPE			FLARE	
		SIZE	LIQUID	mm/in	6.35 / ¼	6.35 / ¼
			GAS	mm/in	12.7 / ½	15.8 / 5/8
	REFRIGERANT CHARGE			kg/lb	1.3 / 2.87	1.4 / 3.09

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a) COOLING - 27°C DB / 19°C WB INDOOR AND 35°C DB / 24°C WB OUTDOOR
b) HEATING - 20°C DB INDOOR AND 7°C DB / 6°C WB OUTDOOR
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.
5) ALL SPECIFICATION ARE TENTATIVE SPECIFICATION AT THE TIME OF PRINTING. PLEASE CONSULT YOUR DEALER FOR CONFIRMATION.
6) SOUND SPECTRUM FOR MWMX020GR / MWMX025GR IS NOT AVAILABLE AT THE TIME OF PRINTING

General Data (With Torque Control)

MODEL		**INDOOR UNIT**			**M5WMX 010GR**	**M5WMX 015GR**
		OUTDOOR UNIT			**M5LCX 010CR**	**M5LCX 015CR**
INDOOR UNIT	**NOMINAL COOLING CAPACITY**			**Btu/h**	9,500 (2,772 - 11,165)	12,000 (2,772 - 15,114)
				W	2,784 (812 - 3,272)	3,517 (812 - 4,430)
	NOMINAL HEATING CAPACITY			**Btu/h**	11,500 (2,699 - 15,655)	13,000 (2,699 - 16,170)
				W	3,370 (791 - 4,588)	3,810 (791 - 4,739)
	NOMINAL TOTAL INPUT POWER (COOLING)			**W**	820 (242 - 1,038)	1,100 (242 - 1,559)
	NOMINAL TOTAL INPUT POWER (HEATING)			**W**	930 (231 - 1,455)	1,057 (231 - 1,865)
	NOMINAL RUNNING CURRENT (COOLING)			**A**	3.9	5.3
	NOMINAL RUNNING CURRENT (HEATING)			**A**	4.5	5.0
	POWER SOURCE			**V/Ph/Hz**	220-240/1/50	
	REFRIGERANT TYPE				R410A	
	INDOOR AIR FLOW	**HIGH**		**CFM / L/s**	300 / 142	330
		MEDIUM		**CFM / L/s**	250 / 118	260
		LOW		**CFM / L/s**	200 / 94	210
	INDOOR SOUND PRESSURE (H/M/L)			**dBA**	38 / 35 / 30	39 / 36 / 31
	INDOOR UNIT DIMENSION	**HEIGHT**		**mm/in**	260 / 10.2	
		WIDTH		**mm/in**	899 / 35.4	
		DEPTH		**mm/in**	198 / 7.8	
	INDOOR PACKING DIMENSION	**HEIGHT**		**mm/in**	337 / 13.3	
		WIDTH		**mm/in**	957 / 37.7	
		DEPTH		**mm/in**	270 / 10.6	
	INDOOR UNIT WEIGHT			**kg/lb**	9.5 / 21	
	CONDENSATE DRAIN SIZE			**mm/in**	16 / 0.63	
OUTDOOR UNIT	**OUTDOOR AIR FLOW**			**CFM / L/s**	800 / 378	900 / 425
	OUTDOOR SOUND PRESSURE			**dBA**	47	52
	OUTDOOR UNIT DIMENSION	**HEIGHT**		**mm/in**	540 / 21.3	
		WIDTH		**mm/in**	700 (+70) / 27.6 (+2.8)	
		DEPTH		**mm/in**	250 / 9.8	
	OUTDOOR PACKING DIMENSION	**HEIGHT**		**mm/in**	601 / 23.7	
		WIDTH		**mm/in**	803 / 31.6	
		DEPTH		**mm/in**	320 / 12.6	
	OUTDOOR UNIT WEIGHT			**kg/lb**	38	
	PIPE CONNECTION	**TYPE**			FLARE	
		SIZE	**LIQUID**	**mm/in**	6.35 / ¼	6.35 / ¼
			GAS	**mm/in**	9.52 / 3/8	12.7 / ½
	REFRIGERANT CHARGE			**kg/lb**	0.80 / 1.76	0.94 / 2.07

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a) COOLING - 27°C DB / 19°C WB INDOOR AND 35°C DB / 24°C WB OUTDOOR
b) HEATING - 20°C DB INDOOR AND 7°C DB / 6°C WB OUTDOOR
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.
5) ALL SPECIFICATION ARE TENTATIVE SPECIFICATION AT THE TIME OF PRINTING. PLEASE CONSULT YOUR DEALER FOR CONFIRMATION.

Components Data

MODEL	INDOOR UNIT			M5WMX 010GR	M5WMX 015GR
	OUTDOOR UNIT			M5LCX 010CR	M5LCX 015CR
INDOOR FAN	TYPE			CROSS FLOW	
	Q'TY			1	
	MATERIAL			ACRYLO NITRILE STYRENE	
	DRIVE			DIRECT	
	DIAMETER		mm/in	97.0 / 3.8	
	LENGTH		mm/in	717.5 / 28.2	
INDOOR FAN MOTOR	TYPE			SCR MOTOR	
	Q'TY			1	
	INDEX OF PROTECTION (IP)			IP24	
OUTDOOR FAN	TYPE			PROPELLER FAN	
	Q'TY			1	
	MATERIAL			GLASS REINFORCED ACRLY STYRENE RESIN	
	DRIVE			DIRECT	
	DIAMETER		mm/in	406.0 / 16.0	
OUTDOOR FAN MOTOR	TYPE			INDUCTION	
	Q'TY			1	
	INDEX OF PROTECTION (IP)			IP33	
COMPRESSOR	TYPE			DC BRUSHLESS SCROLL	
	OIL TYPE			POLYOESTER OIL (POE)	
	OIL AMOUNT		cm^3	360	
INDOOR COIL	TUBE	MATERIAL		SEAMLESS COPPER	
		DIAMETER	mm/in	7.0 / 0.276	
		THICKNESS	mm/in	0.28 / 0.011	
	FIN	MATERIAL		ALUMINIUM (HYDROPHILIC)	
		THICKNESS	mm/in	0.11 / 0.0043	
		FACE AREA	m^2/ft^2	0.193 / 2.08	
		ROW		2	
		FIN PER INCH		18	
OUTDOOR COIL	TUBE	MATERIAL		SEAMLESS INNER GROOVED COPPER	
		DIAMETER	mm/in	7.0 / 0.276	
		THICKNESS	mm/in	0.32 / 0.013	
	FIN	MATERIAL		ALUMINIUM (HYDROPHILIC)	
		THICKNESS	mm/in	0.11 / 0.0043	
		FACE AREA	m^2/ft^2	0.350 / 3.78	
		ROW		2	
		FIN PER INCH		18	
FILTRATION	TYPE			SARANET	
	QUANTITY		pc	2	
	DIMENSION (L x W x t)		mm/in	386 x 364.3 x 1.5 / 15.2 x 14.3 x 0.06	
	TYPE			ANTI-MICROBIAL	
	QUANTITY		pc	1	
	DIMENSION (L x W x t)		mm/in	248 x 43 x 5 / 9.8 x 1.7 x 0.2	
	TYPE			TITANIUM OXIDE	
	QUANTITY		pc	1	
	DIMENSION (L x W x t)		mm/in	248 x 43 x 5 / 9.8 x 1.7 x 0.2	
CASING	INDOOR UNIT		MATERIAL	HIGH IMPACT POLYSTYRENE	
			COLOUR	LIGHT GREY	
	OUTDOOR UNIT		MATERIAL	GALVANISED MILD STEEL	
			COLOUR	LIGHT GREY	

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Components Data

MODEL	INDOOR UNIT			M5WMX 020GR	M5WMX 025GR
	OUTDOOR UNIT			M5LCX 020CR	M5LCX 025CR
INDOOR FAN	TYPE			CROSS FLOW	
	Q'TY			1	
	MATERIAL			ACRYLO NITRILE STYRENE	
	DRIVE			DIRECT	
	DIAMETER		mm/in	108.0 / 4.3	
	LENGTH		mm/in	810.0 / 32.9	
INDOOR FAN MOTOR	TYPE			SCR MOTOR	
	Q'TY			1	
	INDEX OF PROTECTION (IP)			IP54	
OUTDOOR FAN	TYPE			PROPELLER	
	Q'TY			1	
	MATERIAL			GLASS REINFORCED ACRYL STYRENE RESIN	
	DRIVE			DIRECT	
	DIAMETER		mm/in	460.0 / 18	
OUTDOOR FAN MOTOR	TYPE			INDUCTION	
	Q'TY			1	
	INDEX OF PROTECTION (IP)			IP22	
COMPRESSOR	TYPE			DC BRUSHLESS SCROLL	
	OIL TYPE			POLYOESTER OIL (POE)	
	OIL AMOUNT		cm^3	480	
INDOOR COIL	TUBE	MATERIAL		SEAMLESS COPPER TUBE	
		DIAMETER	mm/in	7.0 / 0.276	
		THICKNESS	mm/in	0.28 / 0.011	
	FIN	MATERIAL		ALUMINIUM (HYDROPHILIC)	
		THICKNESS	mm/in	0.11 / 0.0043	
		FACE AREA	m^2/ft^2	0.269 / 2.90	
		ROW		2	
		FIN PER INCH		18	
OUTDOOR COIL	TUBE	MATERIAL		SEAMLESS INNER GROOVED COPPER TUBE	
		DIAMETER	mm/in	7.0 / 0.276	
		THICKNESS	mm/in	0.32 / 0.013	
	FIN	MATERIAL		ALUMINIUM (HYDROPHILIC)	
		THICKNESS	mm/in	0.11 / 0.0043	
		FACE AREA	m^2/ft^2	0.62 / 6.67	
		ROW		2	
		FIN PER INCH		20	
FILTRATION	TYPE			SARANET	
	QUANTITY		pc	2	
	DIMENSION (L x W x t)		mm/in	386 x 364.3 x 1.5 / 15.2 x 14.3 x 0.06	
	TYPE			ANTI-MICROBIAL	
	QUANTITY		pc	1	
	DIMENSION (L x W x t)		mm/in	248 x 43 x 5 / 9.8 x 1.7 x 0.2	
	TYPE			TITANIUM OXIDE	
	QUANTITY		pc	1	
	DIMENSION (L x W x t)		mm/in	248 x 43 x 5 / 9.8 x 1.7 x 0.2	
CASING	INDOOR UNIT		MATERIAL	HIGH IMPACT POLYSTYRENE	
			COLOUR	LIGHT GREY	
	OUTDOOR UNIT		MATERIAL	GALVANISED MILD STEEL	
			COLOUR	LIGHT GREY	

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Components Data (With Torque Control)

MODEL	INDOOR UNIT			M5WMX 010GR	M5WMX 015GR
	OUTDOOR UNIT			M5LCX 010CR	M5LCX 015CR
INDOOR FAN	TYPE			CROSS FLOW	
	Q'TY			1	
	MATERIAL			ACRYLO NITRILE STYRENE	
	DRIVE			DIRECT	
	DIAMETER		mm/in	97 / 3.8	
	LENGTH		mm/in	717.5 / 28.2	
INDOOR FAN MOTOR	TYPE			SCR MOTOR	
	Q'TY			1	
	MOTOR PROTECTION			IP24	
OUTDOOR FAN	TYPE			PROPELLER FAN	
	Q'TY			1	
	MATERIAL			GLASS REINFORCED ACRLY STYRENE RESIN	
	DRIVE			DIRECT	
	DIAMETER		mm/in	406 / 16	
OUTDOOR FAN MOTOR	TYPE			PERMANENT SPLIT CAPACITOR INDUCTION	
	Q'TY			1	
	MOTOR PROTECTION			IP33	
COMPRESSOR	TYPE			DC ROTARY	
	OIL TYPE			Polyoester oil (POE)	
	OIL AMOUNT		cm^3	320	
INDOOR COIL	TUBE	MATERIAL		SEAMLESS COPPER	
		DIAMETER	mm/in	7 / 0.276	
		THICKNESS	mm/in	0.28 / 0.011	
	FIN	MATERIAL		ALUMINIUM (HYDROPHILIC)	
		THICKNESS	mm/in	0.11 / 0.0043	
		FACE AREA	m^2/ft^2	0.193 / 2.08	
		ROW		2	
		FIN PER INCH		18	
OUTDOOR COIL	TUBE	MATERIAL		SEAMLESS INNER GROOVED COPPER	
		DIAMETER	mm/in	7 / 0.276	
		THICKNESS	mm/in	0.32 / 0.013	
	FIN	MATERIAL		ALUMINIUM (HYDROPHILIC)	
		THICKNESS	mm/in	0.11 / 0.0043	
		FACE AREA	m^2/ft^2	0.35 / 3.78	
		ROW		2	
		FIN PER INCH		18	
FILTRATION	TYPE			SARANET	
	QUANTITY		pc	2	
	TYPE			ANTI-MICROBIAL	
	QUANTITY		pc	1	
	TYPE			TITANIUM OXIDE	
	QUANTITY		pc	1	
CASING	INDOOR UNIT		MATERIAL	HIGH IMPACT POLYSTYRENE	
			COLOUR	LIGHT GREY	
	OUTDOOR UNIT		MATERIAL	GALVANISED MILD STEEL	
			COLOUR	LIGHT GREY	

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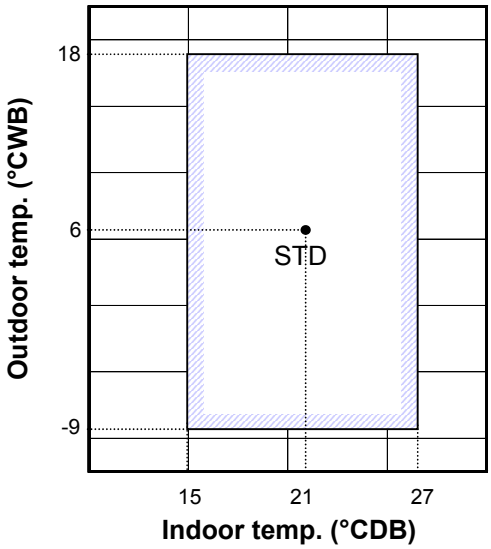
Operating Range

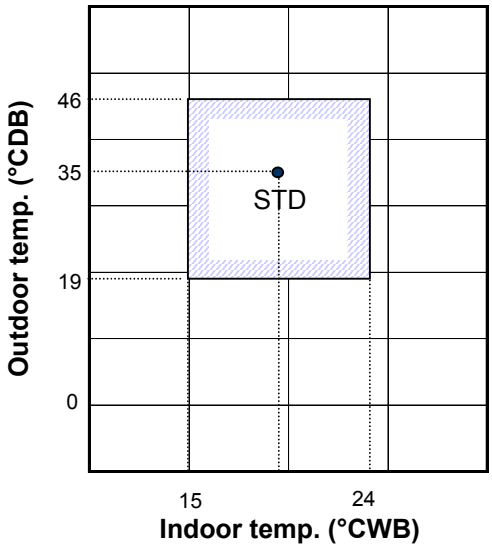
Ensure the operating temperature is in allowable range.

Heatpump

Heating



Cooling

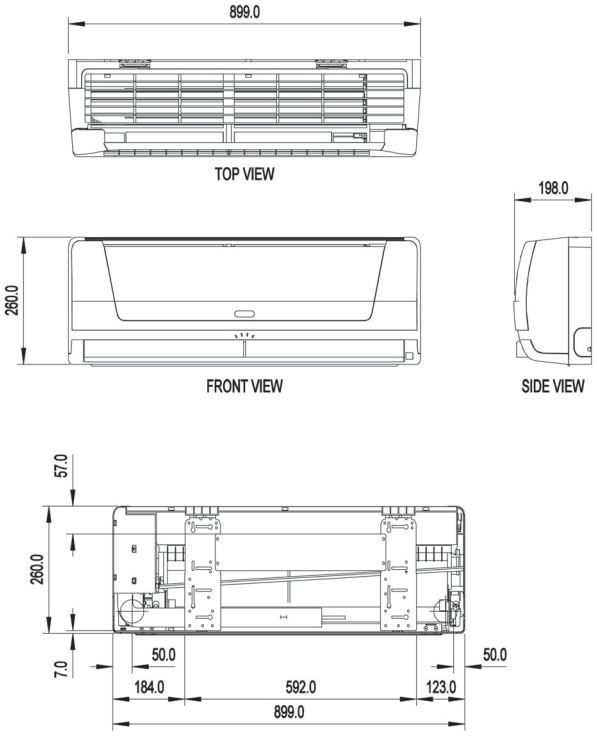


Caution :

The use of your air conditioner outside the range of working temperature and humidity can result in serious failure.

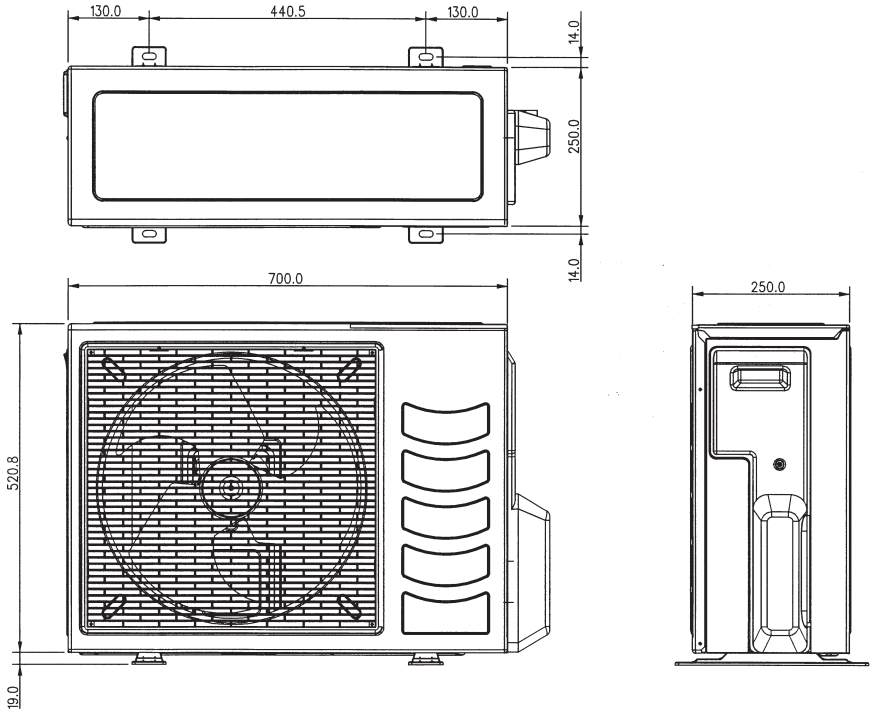
Outlines And Dimensions

INDOOR UNIT
MODEL : M5WMX 010GR / 015GR



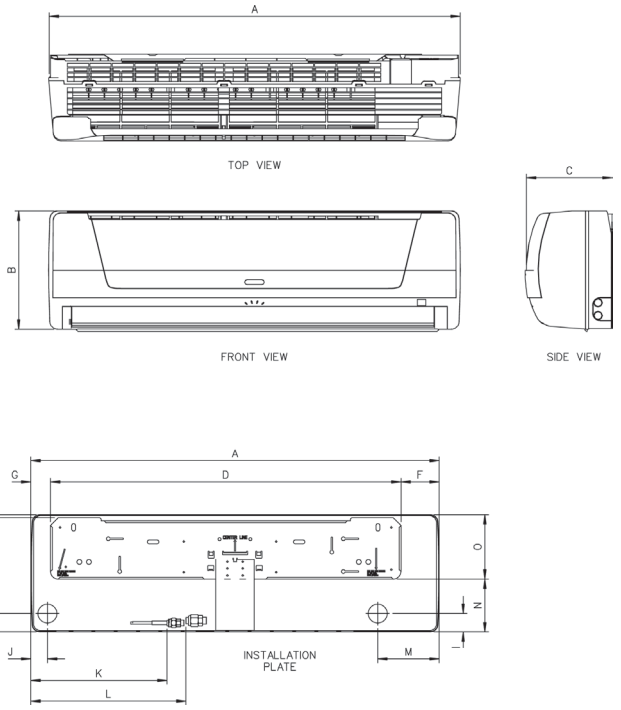
Note : Dimension in mm

OUTDOOR UNIT
MODEL : M5LCX 010CR / 015CR



Note : Dimension in mm

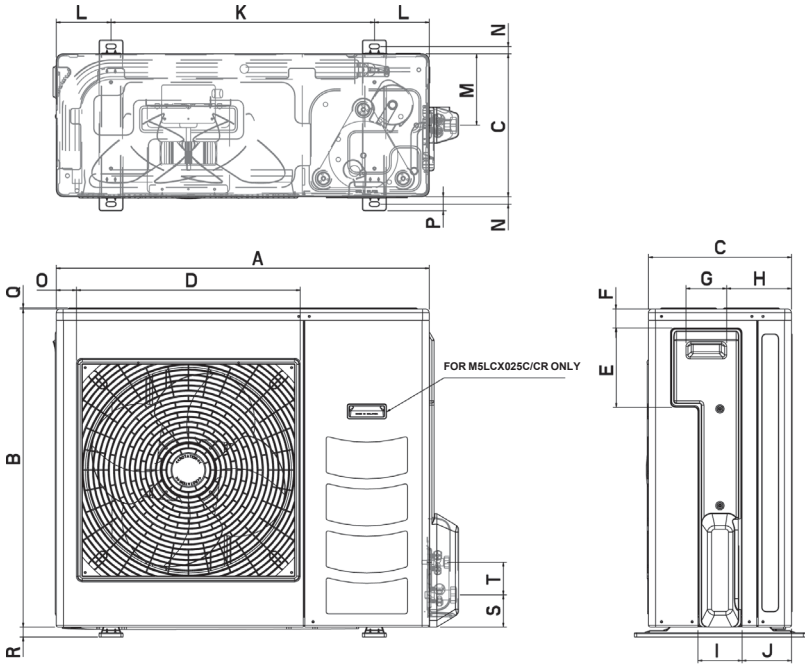
INDOOR UNIT
MODEL : M5WMX 020GR / 025GR



MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
M5WMX 020/025 GR	1062	304	220	912	294	99	51	8	48	43	354	403	160	138	160

Note : Dimension in mm

OUTDOOR UNIT
MODEL : M5LCX 020CR / 025CR



MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
M5LCX 020 CR	855	628	328	508	181	44	93	149	101	113	603	126	164	17	49	32	3	23	73	75
M5LCX 025 CR	855	730	328	513	182	44	93	149	101	113	603	126	164	17	47	32	3	23	73	75

Note : Dimension in mm

Electrical Data

MODEL	INDOOR UNIT		M5WMX 010GR	M5WMX 015GR
	OUTDOOR UNIT		M5LCX 010CR	M5LCX 015CR
INDOOR MOTOR	TYPE		SCR	
	INSULATION GRADE		E	
	POWER SOURCE	V/Ph/Hz	230 / 1 / 50	230 / 1 / 50
	RATED INPUT POWER	W	38	40
	RATED RUNNING CURRENT	A	0.19	0.20
	MOTOR OUTPUT	W	17	17
	POLES		4P	
OUTDOOR MOTOR	TYPE		PERMANENT SPLIT CAPACITOR	
	INSULATION GRADE		B	
	POWER SOURCE	V/Ph/Hz	230 / 1 / 50	230 / 1 / 50
	RATED INPUT POWER	W	56	71
	RATED RUNNING CURRENT	A	0.24	0.31
	MOTOR OUTPUT	W	25	35
COMPRESSOR	TYPE		INVERTER	
	INSULATION GRADE		E	
	POWER SOURCE	V/Ph/Hz	230 / 1 / 50	
	CAPACITOR	μF	-	
	RATED INPUT POWER (COOLING)	W	686	984
	RATED INPUT POWER (HEATING)	W	886	1159
	RATED RUNNING CURRENT (COOLING)	A	3.4	5.4
	RATED RUNNING CURRENT (HEATING)	A	4.4	4.9
	LOCKED ROTOR AMP.	A	40	

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MODEL	INDOOR UNIT		M5WMX 020GR	M5WMX 025GR
	OUTDOOR UNIT		M5LCX 020CR	M5LCX 025CR
INDOOR MOTOR	TYPE		SCR	
	INSULATION GRADE		B	
	POWER SOURCE	V/Ph/Hz	230 / 1 / 50	
	RATED INPUT POWER	W	60	75
	RATED RUNNING CURRENT	A	0.31	0.40
	MOTOR OUTPUT	W	40	40
	POLES		4	
OUTDOOR MOTOR	TYPE		PERMANENT SPLIT CAPACITOR	
	INSULATION GRADE		E	
	POWER SOURCE	V/Ph/Hz	230 / 1 / 50	230 / 1 / 50
	RATED INPUT POWER	W	130	140
	RATED RUNNING CURRENT	A	0.58	0.58
	MOTOR OUTPUT	W	75	80
COMPRESSOR	TYPE		INVERTER	
	INSULATION GRADE		E	
	POWER SOURCE	V/Ph/Hz	230 / 1 / 50	
	CAPACITOR	μF	-	
	RATED INPUT POWER (COOLING)	W	1440	1775
	RATED INPUT POWER (HEATING)	W	1430	1785
	RATED RUNNING CURRENT (COOLING)	A	7.0	9.5
	RATED RUNNING CURRENT (HEATING)	A	6.9	10.0
	LOCKED ROTOR AMP.	A	30	

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Electrical Data (With Torque Control)

MODEL	INDOOR UNIT		M5WMX 010GR	M5WMX 015GR
	OUTDOOR UNIT		M5LCX 010CR	M5LCX 015CR
INDOOR MOTOR	TYPE		SCR MOTOR	
	INSULATION GRADE		E	
	POWER SOURCE	V/Ph/Hz	230 / 1 / 50	230 / 1 / 50
	RATED INPUT POWER	W	38	40
	RATED RUNNING CURRENT	A	0.19	0.20
	MOTOR OUTPUT	W	17	17
	POLES		4P	
OUTDOOR MOTOR	TYPE		PERMANENT SPLIT CAPACITOR INDUCTION	
	INSULATION GRADE		B	
	POWER SOURCE	V/Ph/Hz	230 / 1 / 50	230 / 1 / 50
	RATED INPUT POWER	W	56	71
	RATED RUNNING CURRENT	A	0.24	0.31
	MOTOR OUTPUT	W	25	35
COMPRESSOR	TYPE		DC ROTARY	
	INSULATION GRADE		E	
	POWER SOURCE	V/Ph/Hz	230 / 1 / 50	
	CAPACITOR	μF	-	
	RATED INPUT POWER (COOLING)	W	726	989
	RATED INPUT POWER (HEATING)	W	836	929
	RATED RUNNING CURRENT (COOLING)	A	3.5	4.8
	RATED RUNNING CURRENT (HEATING)	A	4.1	4.5
	LOCKED ROTOR AMP.	A	40	

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Controller

G11 Remote Controller

Temperature Setting

- To set the desired room temperature, press the button to increase or decrease the set temperature.
- The temperature setting range is from 16°C to 30°C
- Press both buttons simultaneously to toggle the temperature setting between °C and °F

Turbo Mode

- Press the TURBO button to achieve the required set temperature in a short time.

Sleep Mode

- Press the button to activate sleep mode. This function is available under COOL, HEAT & AUTO mode.
- When it is activated in COOL mode, the set temperature will be increased 0.5°C after 30mins, 1°C after 1 hour and 2°C after 2 hours.
- When it is activated in HEAT mode, the set temperature will be decreased 1°C after 30mins, 2°C after 1 hour and 3°C after 2 hours.

ON Timer Setting

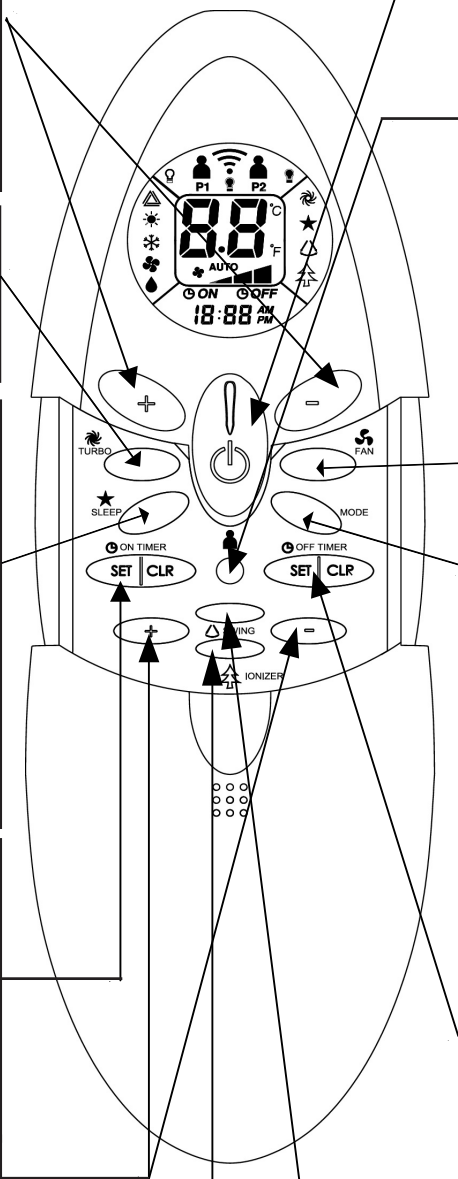
- Press the SET button will activate the on timer function.
- Set the desired on time by pressing the SET button continuously.
- Press the CLR button to cancel the off timer setting

Clock Time Setting

- Press button + or - to increase or decrease the clock time.

Ionizer

- Press the button to activate the negative Ion function, which will refresh the indoor air effectively.



On/Off Button

- Press Once to start the air conditioner
- Press again to stop the unit

Personalised Setting

- Press and hold the button for 3s to initiate personalized setting.
- Set the individual setting e.g. MODE, SET TEMP or FAN SPEED and leave for 4s to save
- 2 groups of settings are allowed to stored in the handset

Fan Speed Selection

- Press the button until the desired fan speed is achieved.

Operating Mode

- Press the MODE button to select the type of operating mode.
- For Cooling only unit, the available modes are: COOL, DRY & FAN.
- For Heatpump unit, the available modes are: AUTO, COOL, DRY, FAN & HEAT.

OFF Timer Setting

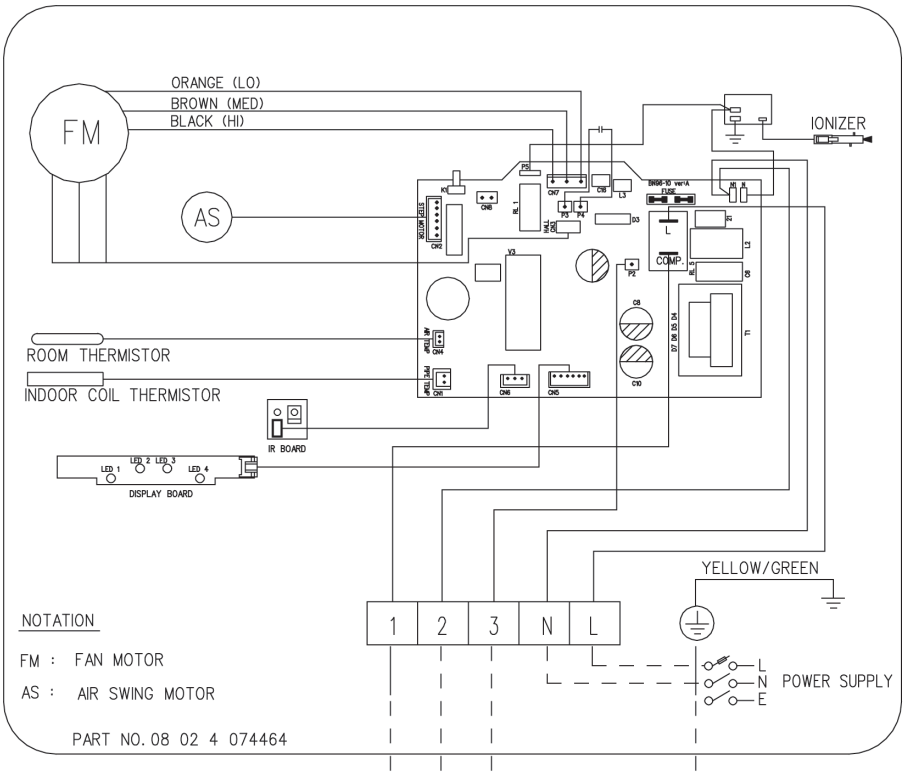
- Press the SET button will activate the off timer function.
- Set the desired off time by pressing the SET button continuously.
- Press the CLR button to cancel the off timer setting

Automatic Air Awing

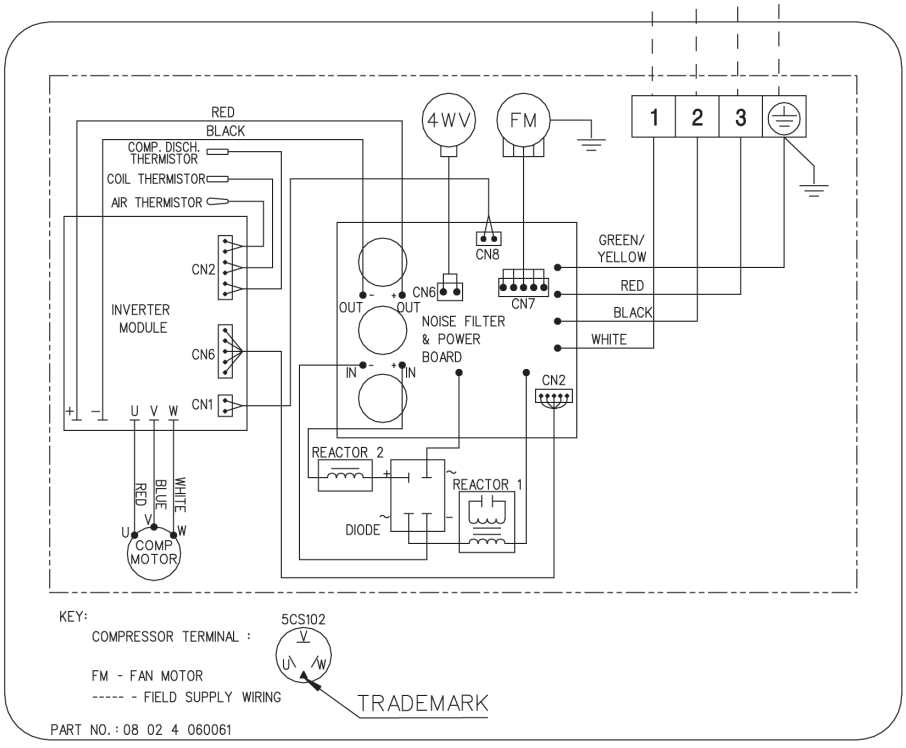
- Press the SWING button to activate the automatic air swing function.
- To distribute the air to a specific direction, press the SWING button and wait until the louver move to the desired direction and press the button once again.

Wiring Diagrams

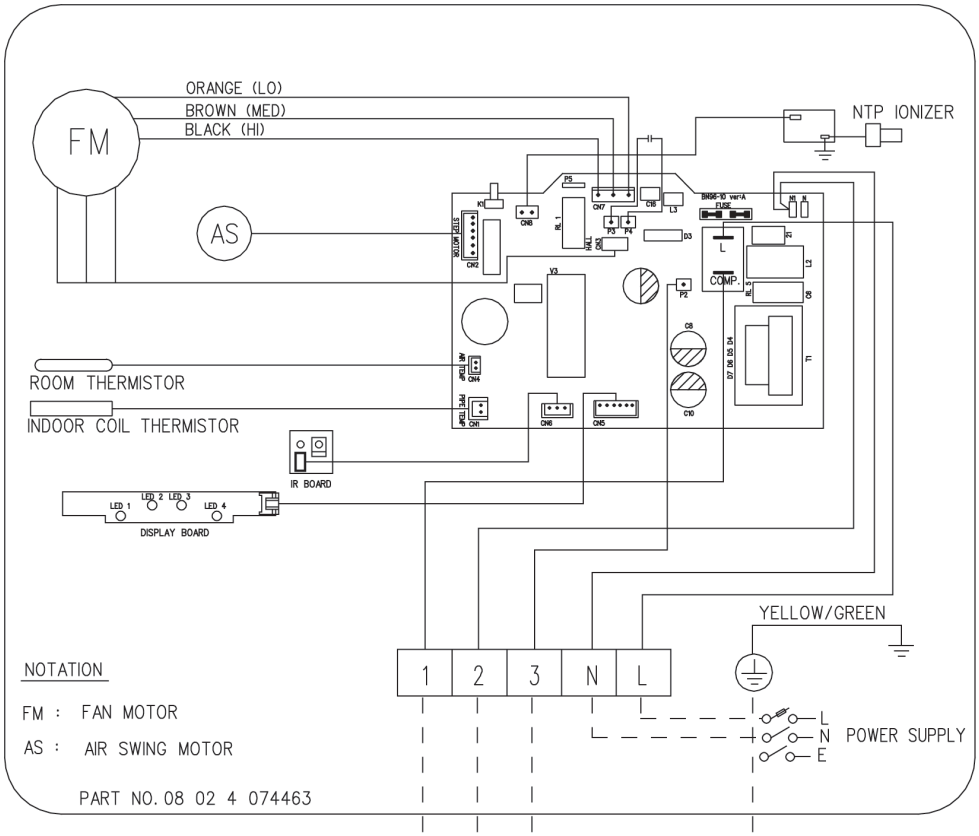
INDOOR UNIT
MODEL : M5WMX 010GR/015GR (WITH IONIZER)



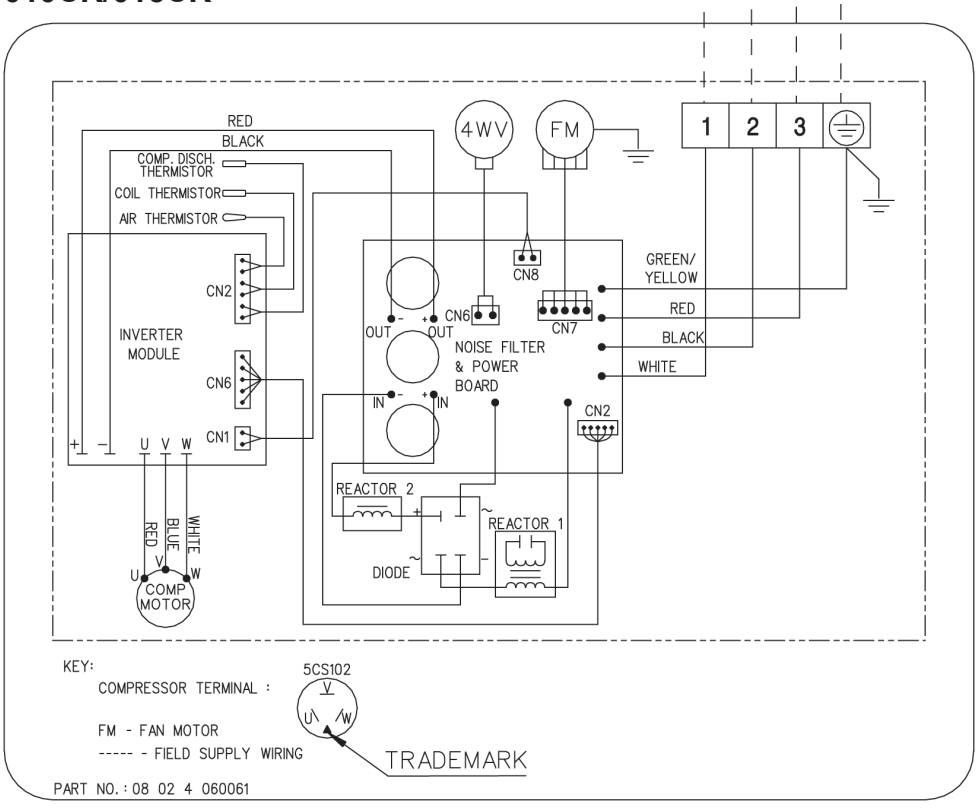
OUTDOOR UNIT
MODEL : M5LCX 010CR/015CR



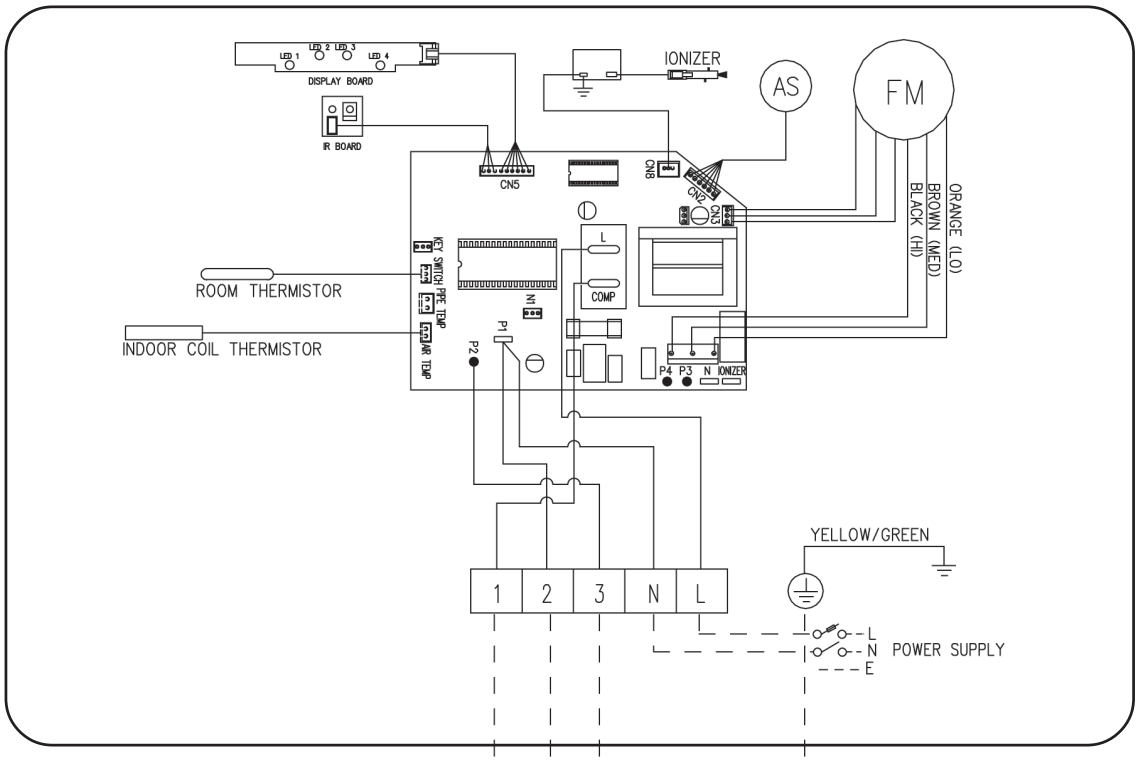
INDOOR UNIT
MODEL : M5WMX 010GR/015GR (WITH NON-THERMAL PLASMA)



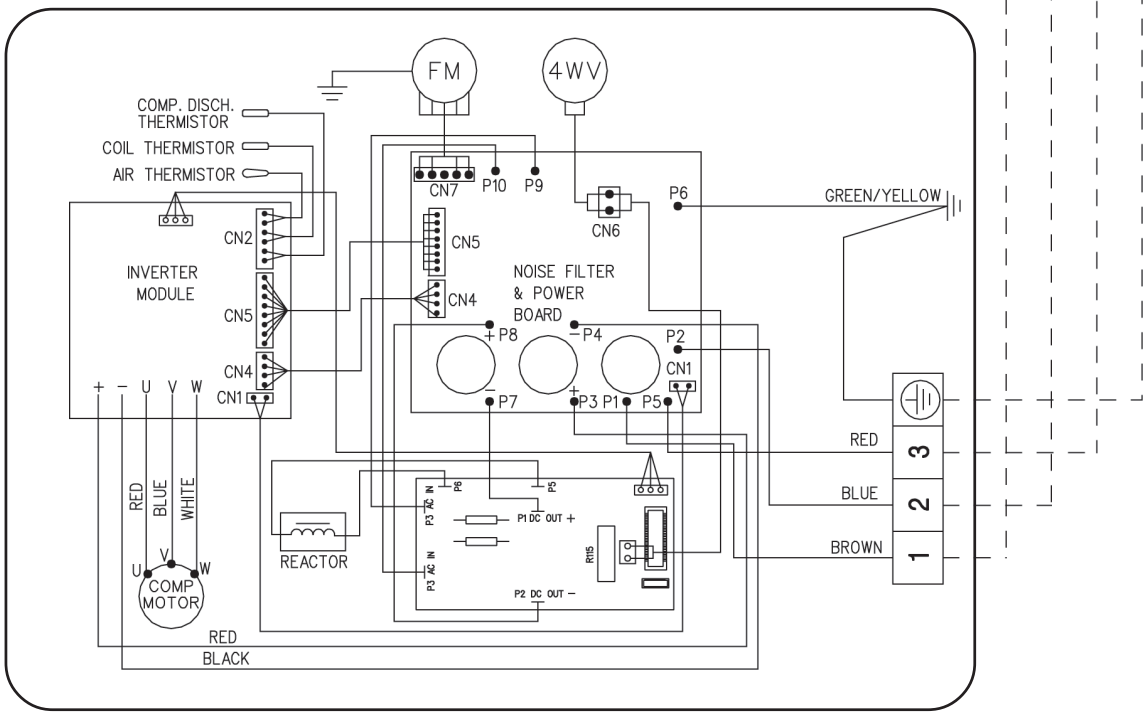
OUTDOOR UNIT
MODEL : M5LCX 010CR/015CR



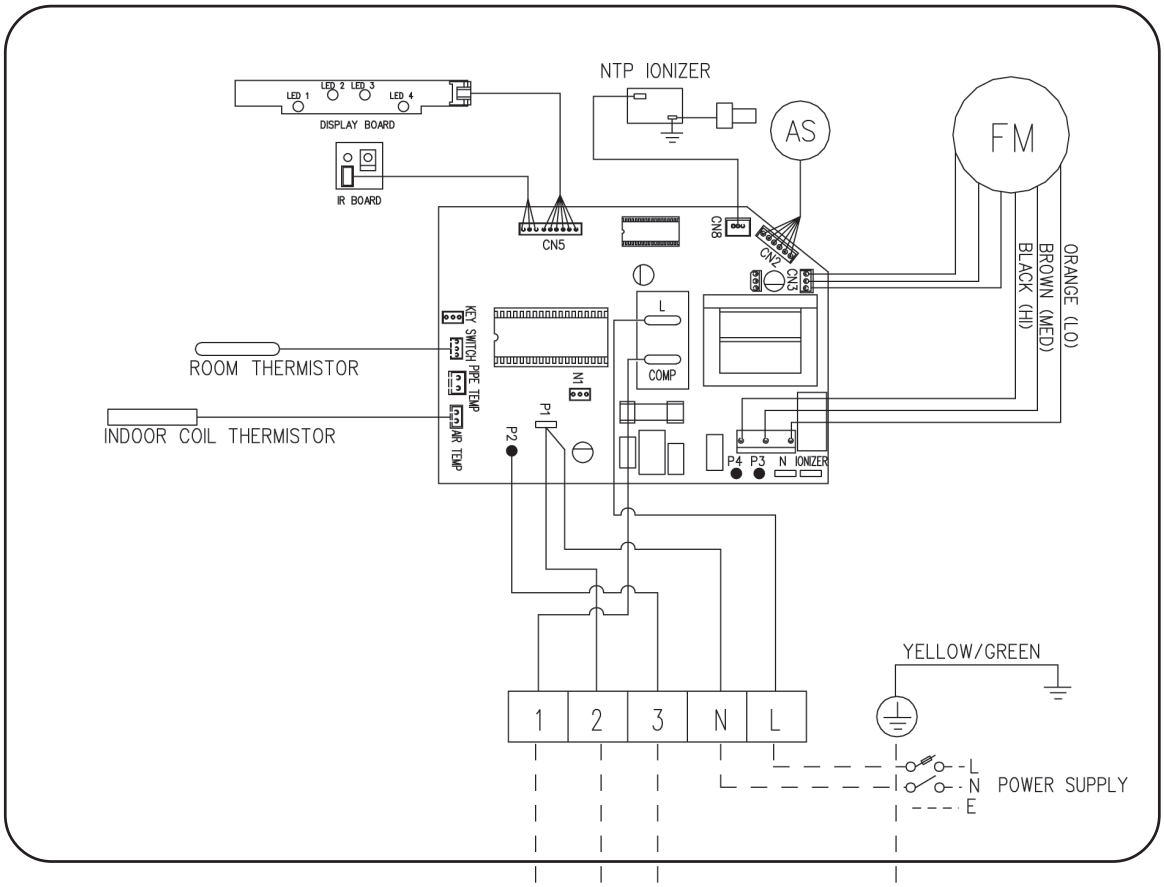
INDOOR UNIT
MODEL : M5WMX 020GR/025GR (WITH IONIZER)



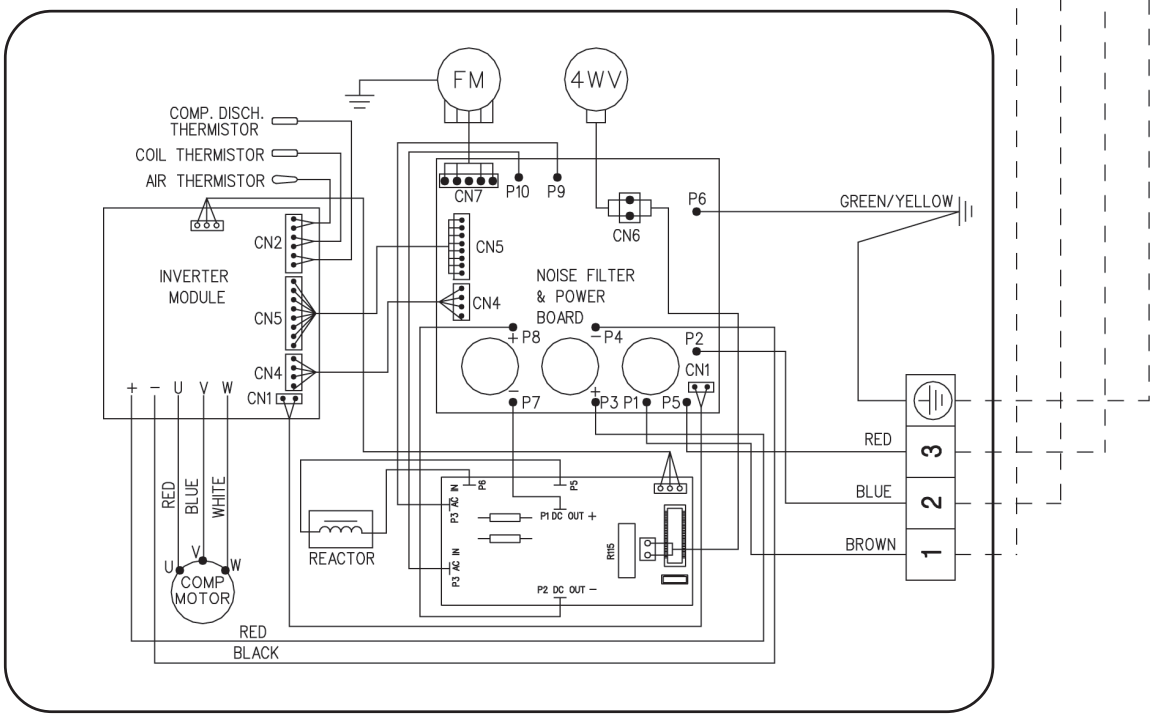
OUTDOOR UNIT
MODEL : M5LCX 020CR/025CR



INDOOR UNIT
MODEL : M5WMX 020GR/025GR (WITH NON-THERMAL PLASMA)

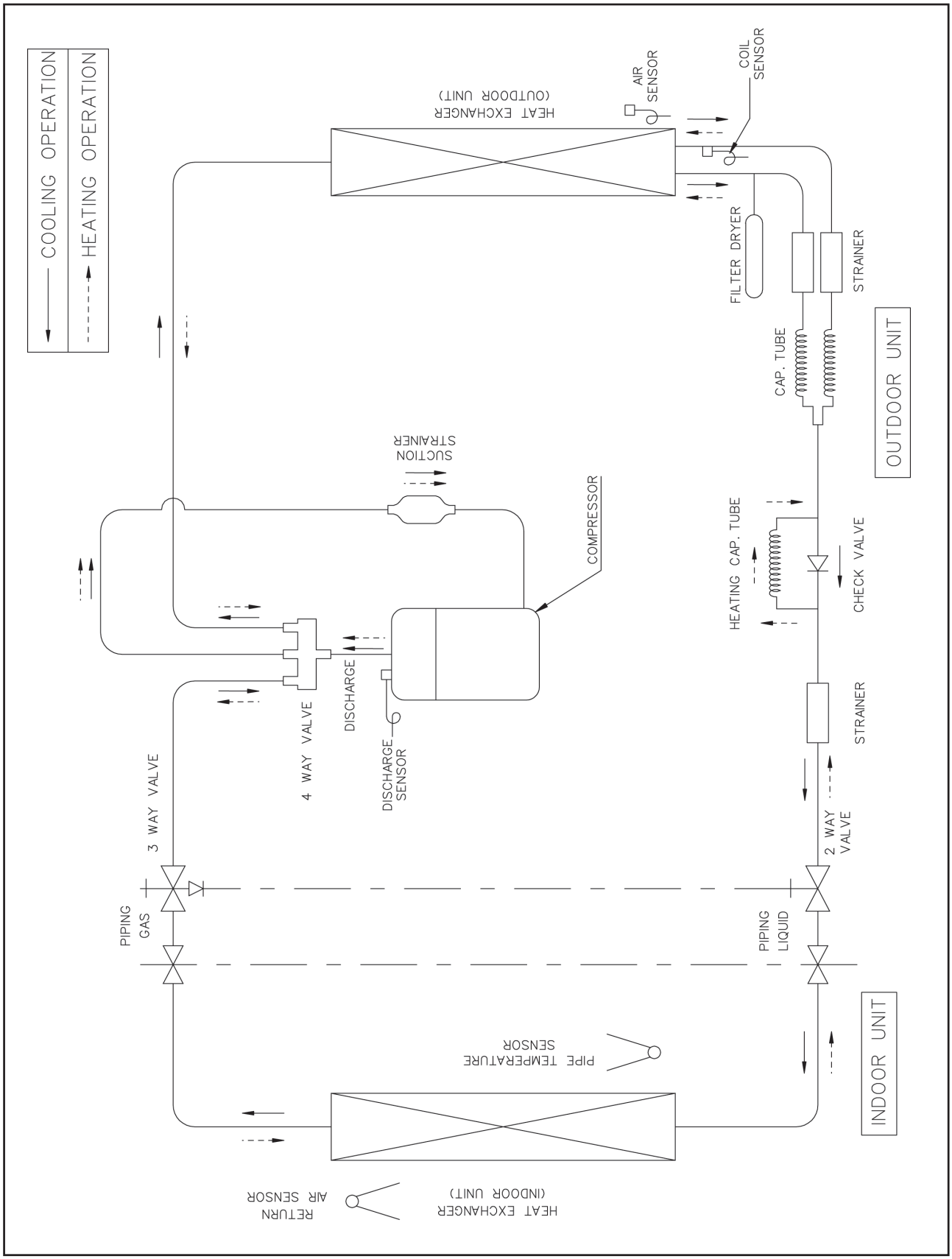


OUTDOOR UNIT
MODEL : M5LCX 020CR/025CR

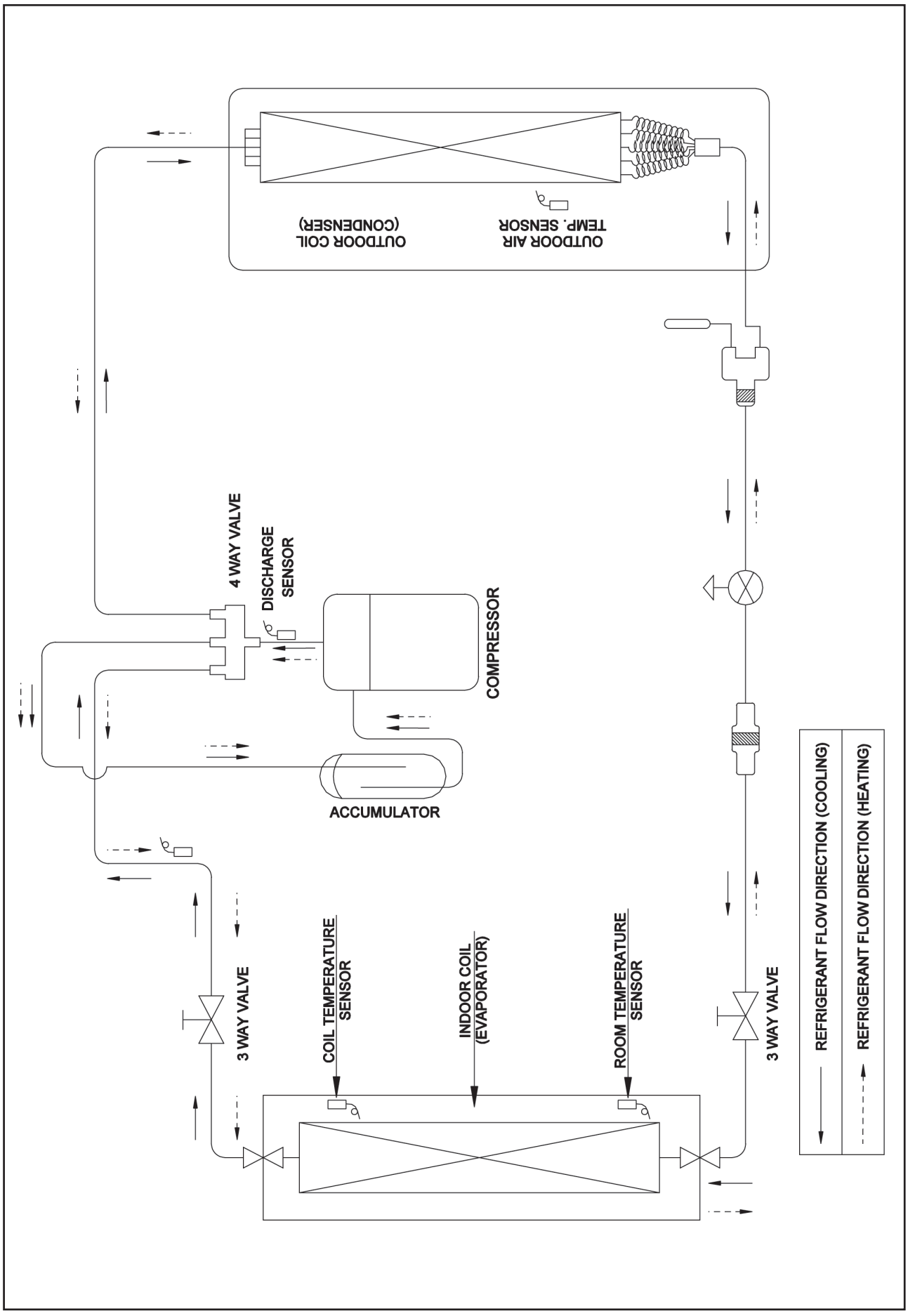


Refrigerant Circuit Diagram

MODEL : M5WMX 010GR/015GR c/w M5LCX 010CR/015CR

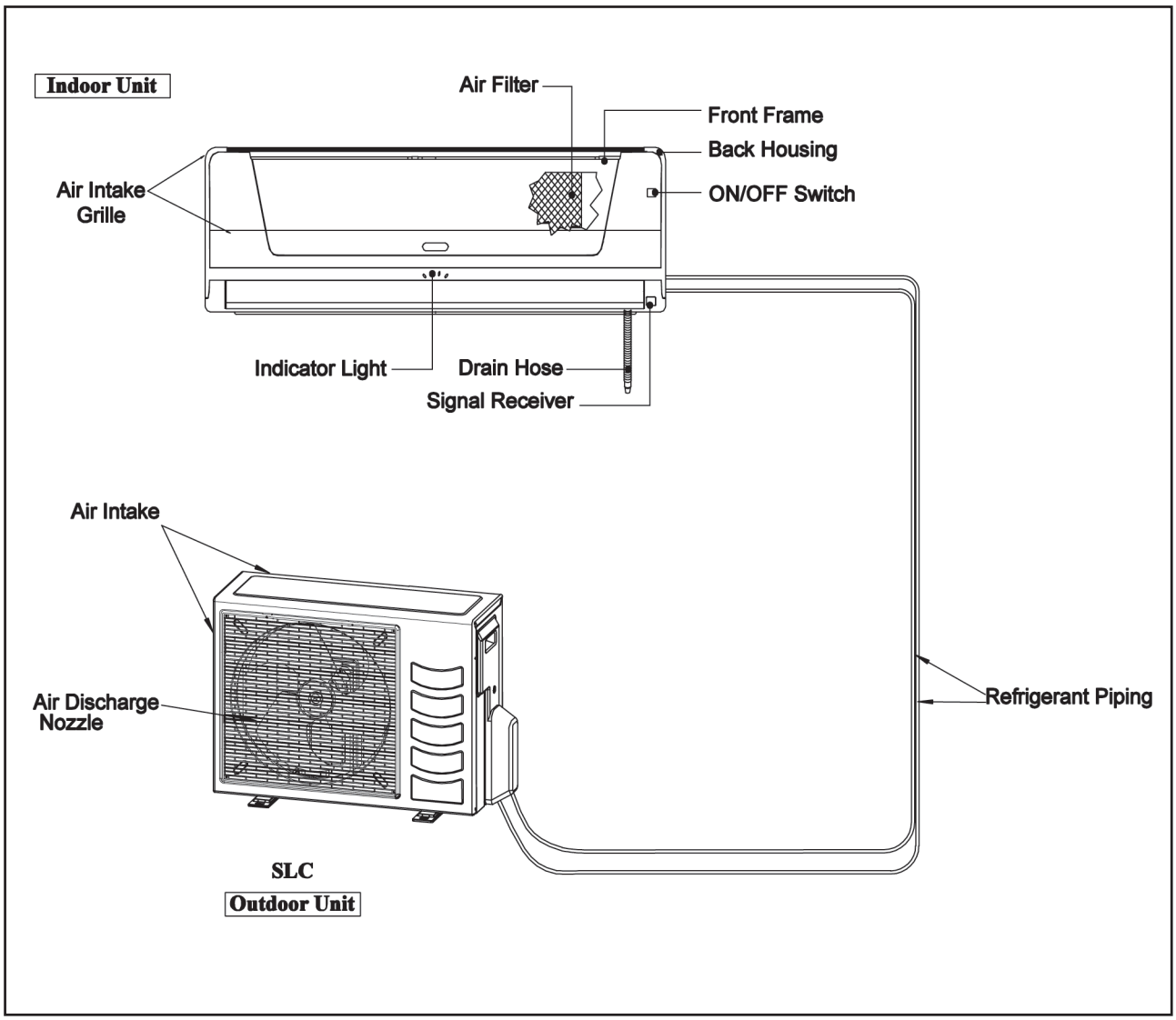


MODEL : M5WMX 020GR/025GR c/w M5LCX 020CR/025CR



Installation

INSTALLATION DIAGRAM



1. SELECTION OF LOCATION AND SPACE

A) INDOOR UNIT

Install the fan coil (indoor) unit at a location with the following requirements

- Location is suitable for wiring, piping and drainage.
- No obstruction of air flow into and out of unit where cooler air can be evenly distributed.(See fig. 1)
- Ensure that air discharge is not short circuited with air intake.
- Ensure that wall is sufficiently strong, rigid, flat, perpendicular and vibration free.
- Where air filter cassette can be slides in or out easily.
- Where there is no danger of flammable gases.
- Where there is no direct sunlight on unit.
- Also to take into consideration a place for the installation of the Wireless LCD Remote Controller.

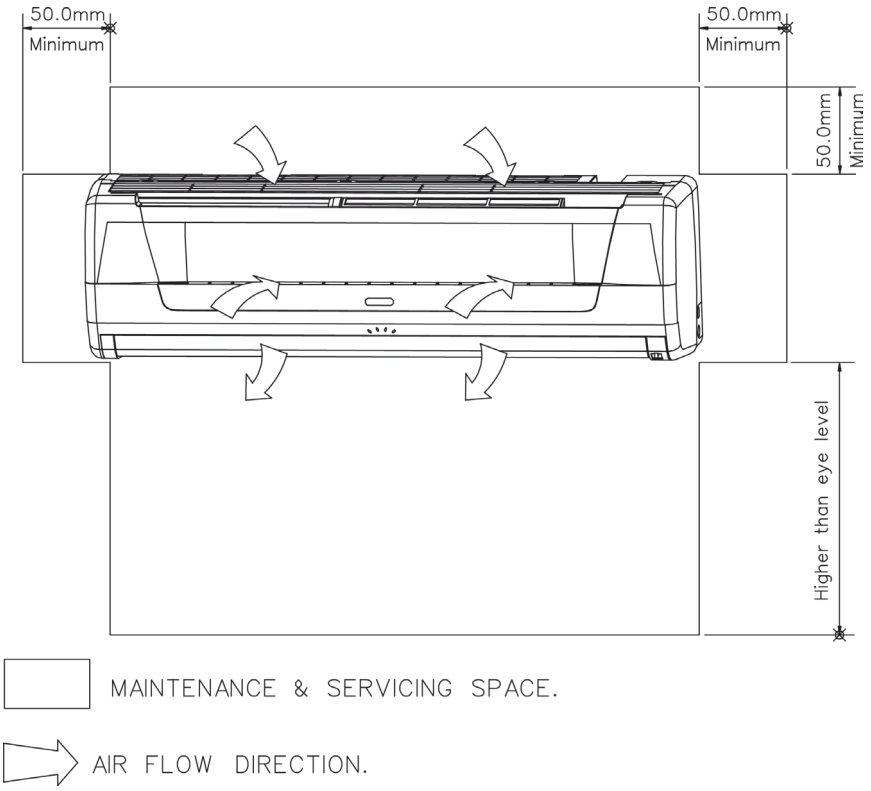
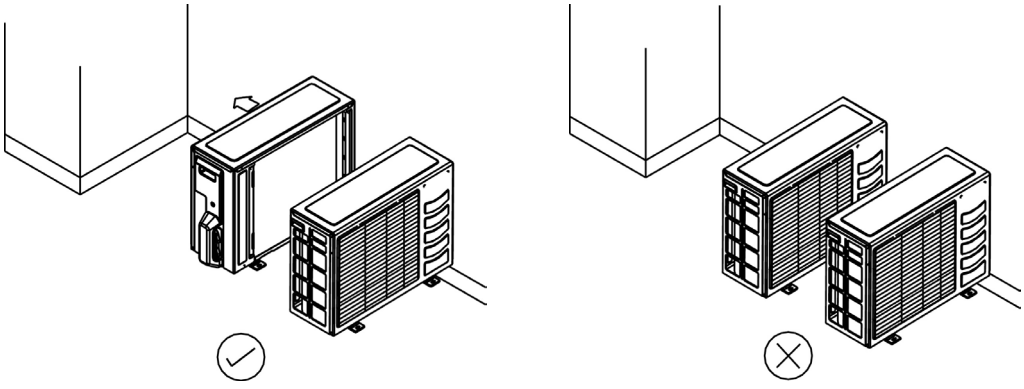


Figure 1

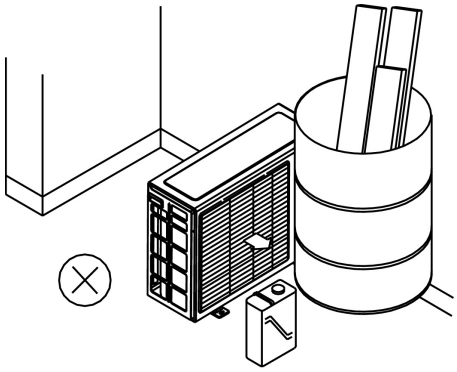
B) OUTDOOR UNIT

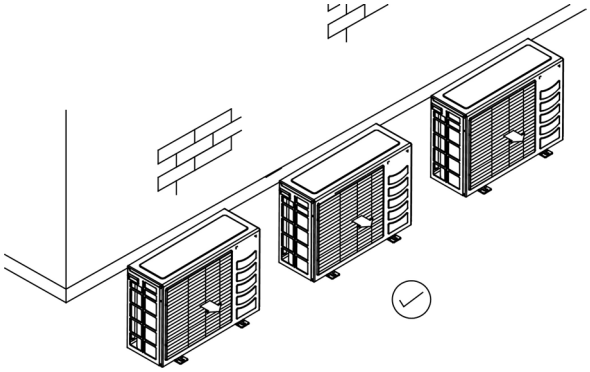
As condensing temperature rises, evaporating temperature rises and cooling capacity drops. In order to achieve maximum cooling capacity, the location selected for outdoor unit should fulfill the following requirements:

- Install the condensing (outdoor) unit in such a way that hot air distributed by the outdoor condensing unit cannot be drawn in again (as in the case of short circuit of hot discharge air). Allow sufficient space for maintenance around the unit.

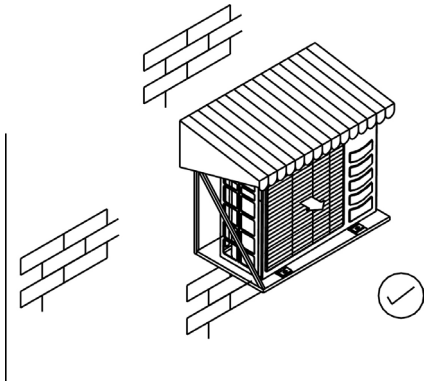


- Ensure that there is no obstruction of air flow into or out of the unit. Remove obstacles which block air intake or discharge.
- The location must be well ventilated, so that the unit can draw in and distribute plenty of air thus lowering the condensing temperature.





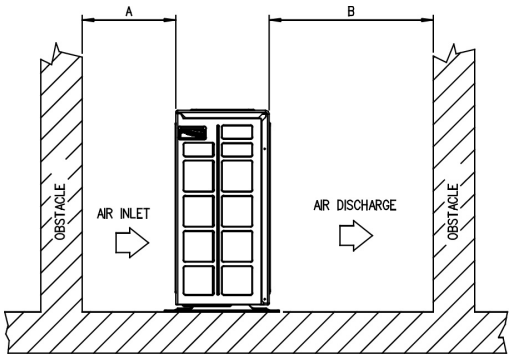
- A place capable of bearing the weight of the outdoor unit and isolating noise and vibration.
- A place protected from direct sunlight. Otherwise use an awning for protection, if necessary.

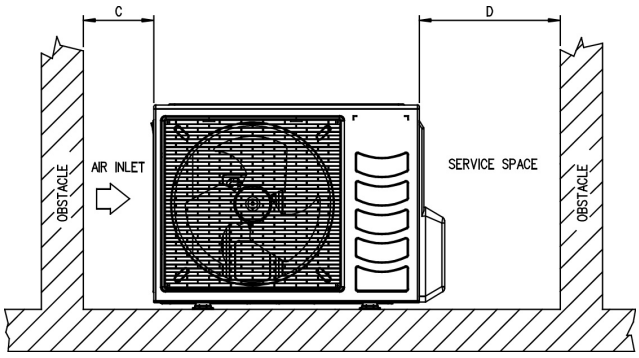


- The location must not be susceptible to dust or oil mist.

2. INSTALLATION CLEARANCES

- Outdoor units must be installed such that there is no short circuit of the hot discharge air or obstruction to smooth air flow. Select the coolest possible place where intake air should not be hotter than the outside temperature.





Dimension	A	B	C	D
Minimum distance, mm/in	300/11.8	1000/39.4	300/11.8	500/19.7

CAUTION :

- If the condensing unit is operated in an atmosphere containing oils(including machine oils), salt(coastal area), sulphide gas(near hot spring, oil refinery plant), such substances may lead to failure of the unit.
- If there is any obstacle higher than 2m, or if there is any obstruction at the upper part of the unit, please allow more space than the figure indicated in the above table.

3. DRILLING HOLES AND MOUNTING PLATE INSTALLATION

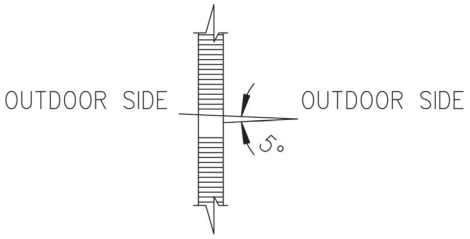
Cautions:

i) Please check the unit weight for each model. Always ensure that the wall is sufficiently strong to withstand the weight. If not, it is necessary to reinforce the wall with plate, beams or pillars.

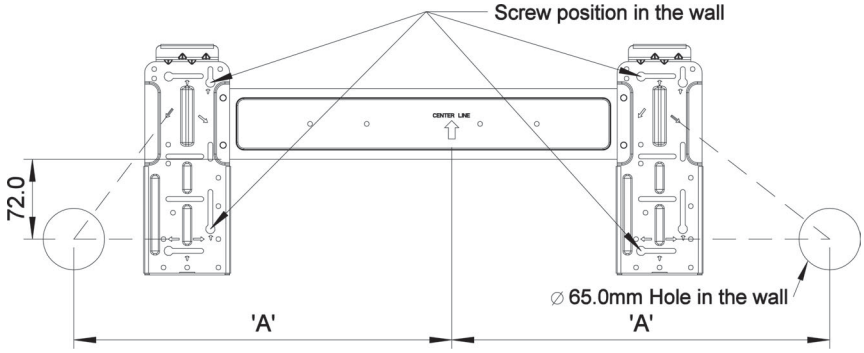
ii) The unit cannot be directly fixed onto the wall or the likes. In all cases, the installation plate provided MUST be used.

- Paste the installation plate provided on the desired location on the wall and marks the holes location accordingly.
- Ensure that the minimum maintenance and servicing space at the top, left and right side of the unit is reserved.
- Ensure also the levelness of the installation plate.
- Drill the screw mounting holes (minimum 4 screws are required).
- Drill the pipe hole at the location as per plan. (This is only applicable for rear piping outlet installation).

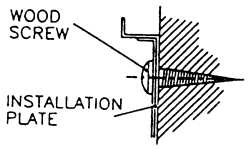
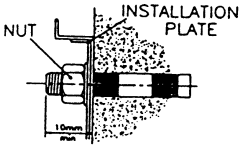
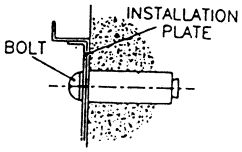
Note: The hole should be drilled slightly lower at outdoor side as per figure below:-



- Fix the installation plate firmly to wall, without tilting to left or right. Use a plumb line, if available.

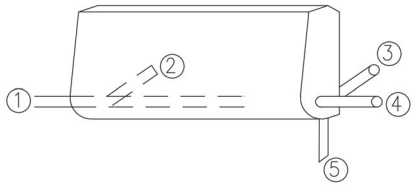


- Fixing methods:-

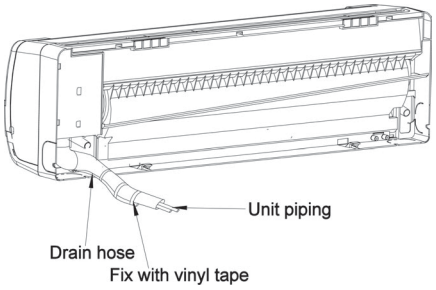
WOODEN	REINFORCED CONCRETE BUILDING	
	NUT ANCHOR	BOLT ANCHOR
		

4. INDOOR UNIT PREPARATION

- The refrigerant piping can be routed to the unit in 5 directions, by using the cut outs in the unit casing.

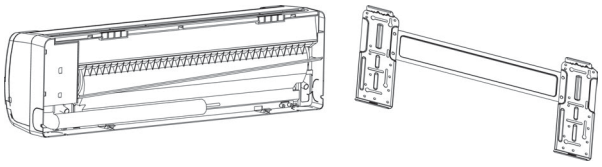


- Carefully bend the pipes to the required position to align with the hole. For right hand and rear side draw out, hold the bottom of the piping and fix direction before shaping it to the desired position. The condensation drain hose should be taped to the pipes with vinyl tape. The electrical cable can also be taped to the pipes.

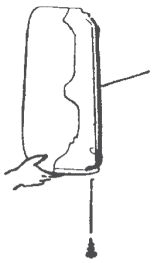


5. MOUNTING INDOOR UNIT

- Hook the indoor unit onto the upper portion of installation plate. (Engage the 2 hooks of rear top of the indoor unit with the upper edge of the installation plate). Ensure the hooks are properly seated on the installation plate by moving in left and right.



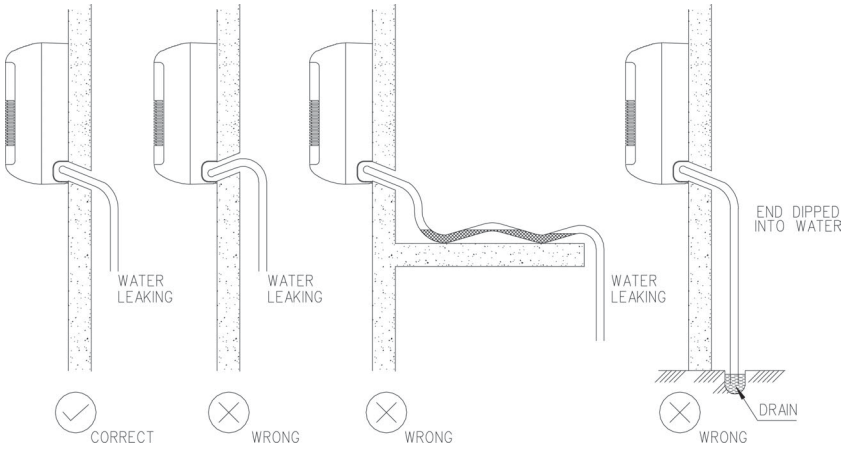
1. Hook the unit into the installation plate. of installation.



2. Fix the rivet underneath after completion

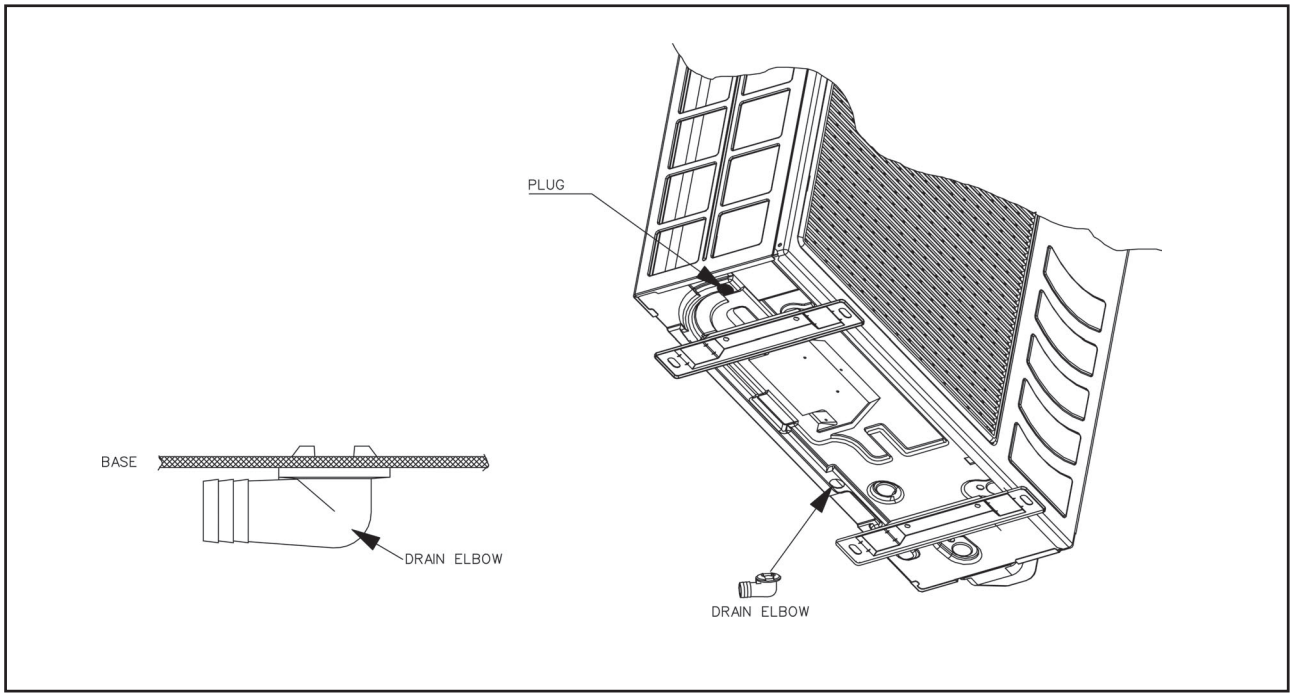
6. WATER DRAINAGE PIPING

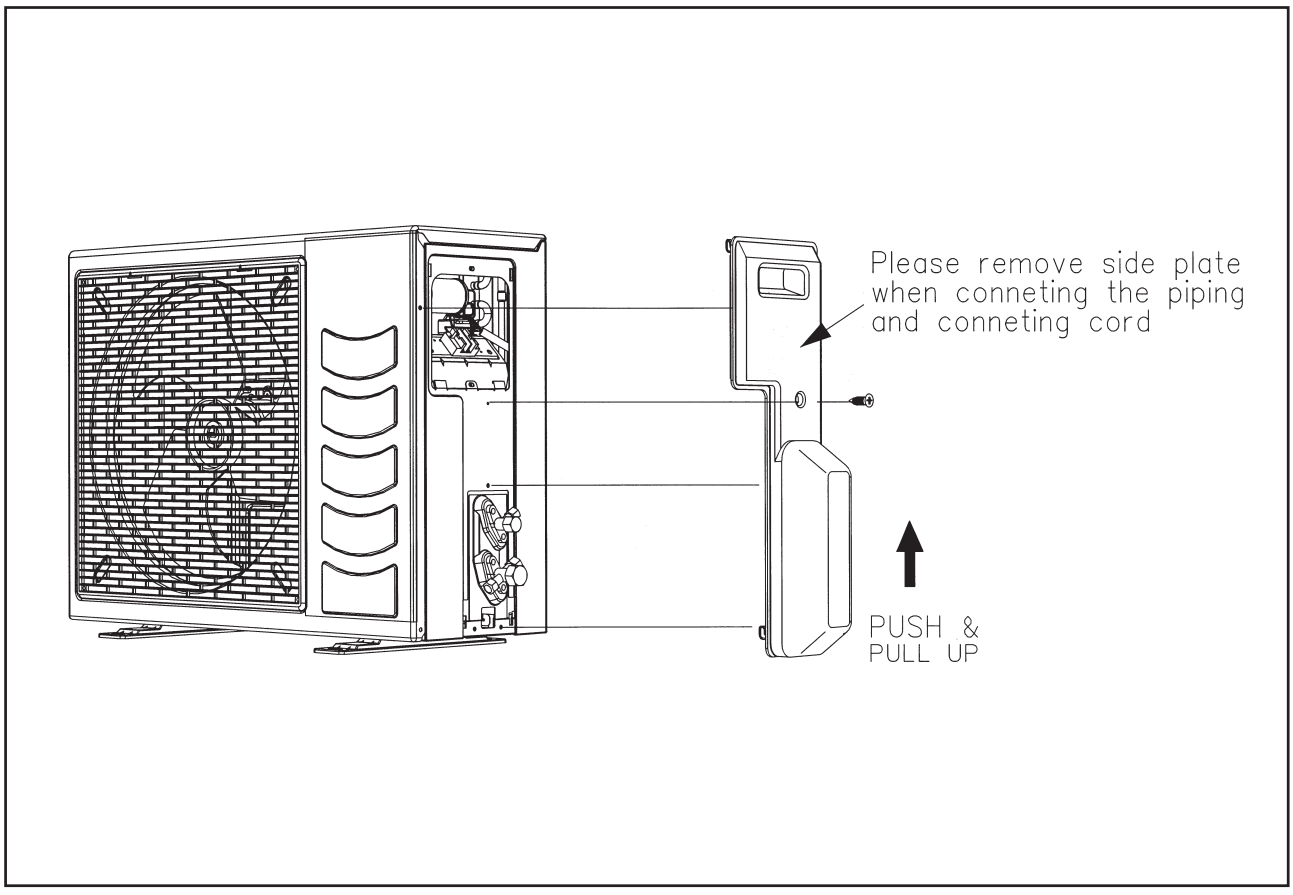
- The indoor drain pipe must be downward gradient for smooth drainage. Avoid situation as shown in figure below.



7. CONDENSED WATER DISPOSAL OF OUTDOOR UNIT (HEAT PUMP UNIT ONLY)

- There are 2 holes on the base of Outdoor Unit for condensed water to flow out. Insert the drain elbow to one of the holes.
- To install the drain elbow, first insert one portion of the hook to the base (portion A), then pull the drain elbow in the direction shown by the arrow while inserting the other portion to the base. After the installation, check to ensure that the drain elbow clings to base firmly.
- If the unit is installed in a snowy and chilly area, condensed water may freeze in the base. In such a case, please remove plug at the bottom of unit to smooth the drainage.

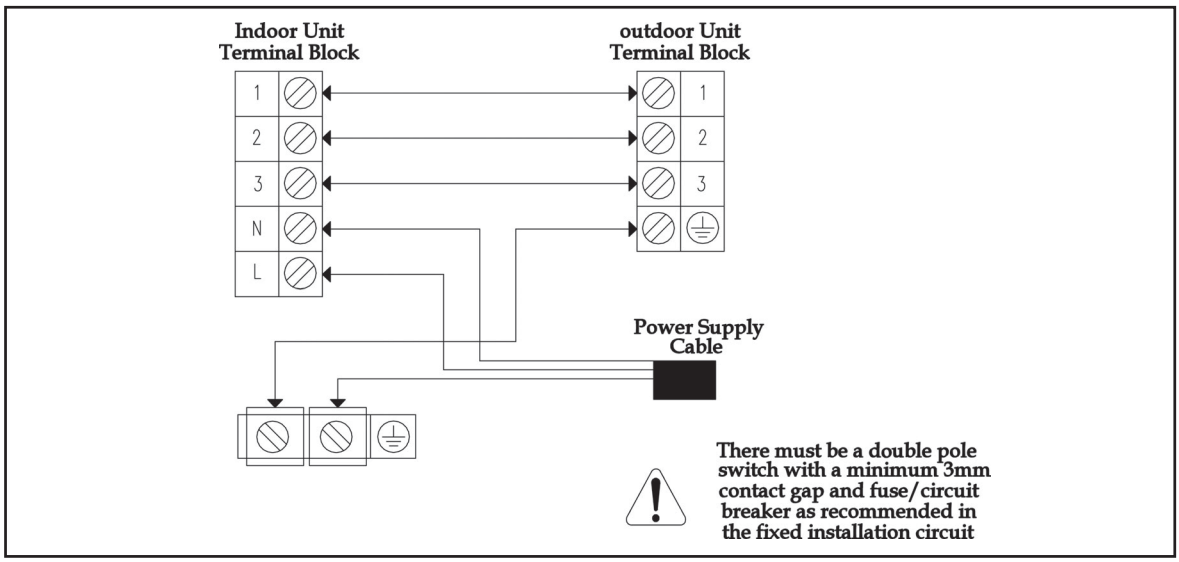




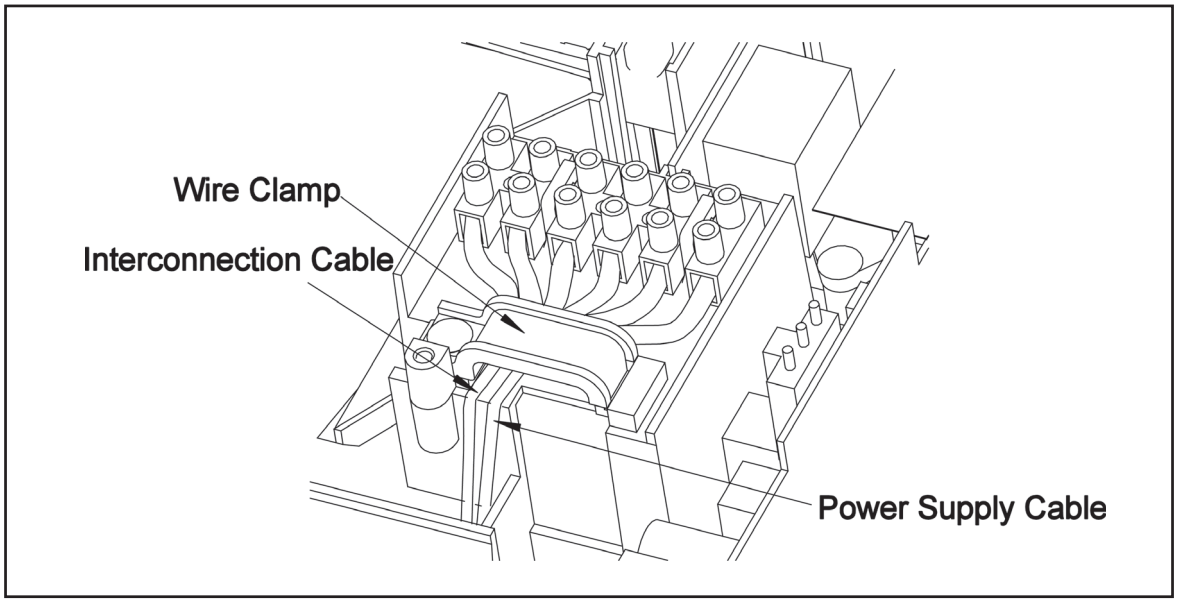
8. WIRING

Important: The figures shown in the table are for information purpose only. They should be checked and selected to comply with the local/national codes of regulations. This is also subject to the type of installation and conductors used.

Model	M5WMX 010G/015G	M5WMX 020G/025G
Voltage range	220V-240V / 1 Ph / 50Hz + ⏚	
Power supply cable size (mm^2)	1.5	2.5
Number of wire	3	3
Interconnection cable size (mm^2)	1.5	2.5
Number of wire	3	3
Recommended time delay fuse (A)	15	20

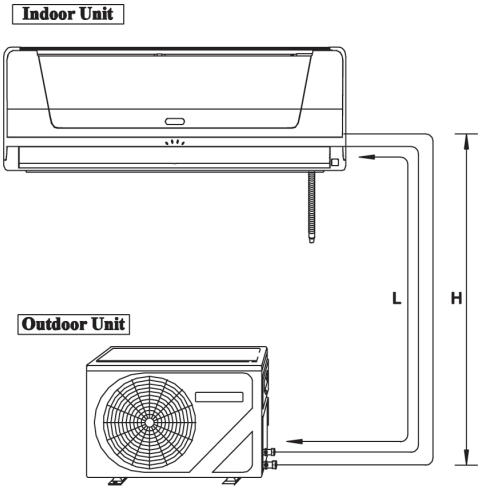


- All wires must be firmly connected
- All wires must not touch the refrigerant piping, compressor or any moving parts of the fan motor.
- The connecting wires between the indoor unit and the outdoor unit must be clamped on the wire clamps as shown in the figure.
- The power supply cord must be equivalent to H05RN-F (245IEC57) which is the minimum requirement.



9. REFRIGERANT PIPING

A) Maximum Pipe Length and Maximum Number of Bends



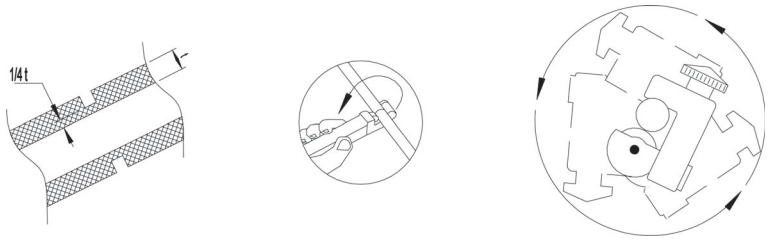
Always choose the shortest path for refrigerant piping and follow the recommendation as tabulated below:

Model	M5WMX010GR	M5WMX015GR	M5WMX020GR	M5WMX025GR
Maximum length, L (m/ft)	15/49	15/49	30/98	30/98
Max. elevation, H (m/ft)	5/16.4	5/16.4	8/26.2	8/26.2
Max. number of 90° bends	10	10	10	10
Liquid pipe size	¼"	¼"	¼"	¼"
Gas pipe size	$^{3}/_{8}$"	½"	½"	$^{5}/_{8}$"

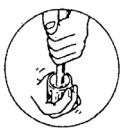
Remarks: The refrigerant pre-charged in the outdoor unit is for piping length up to 7.62m/25ft.

B) Flare Connection

- Cut the pipe stages by stages, advancing the blade of pipe cutter slowly.

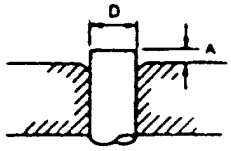


- Remove burr with the burr remover. Hold the flaring end down to prevent burrs from dropping inside pipe.



- The exact length of pipe protruding from the face of the flare die is determined by the flaring tool. The table shows the use of an imperial die and rigid die.

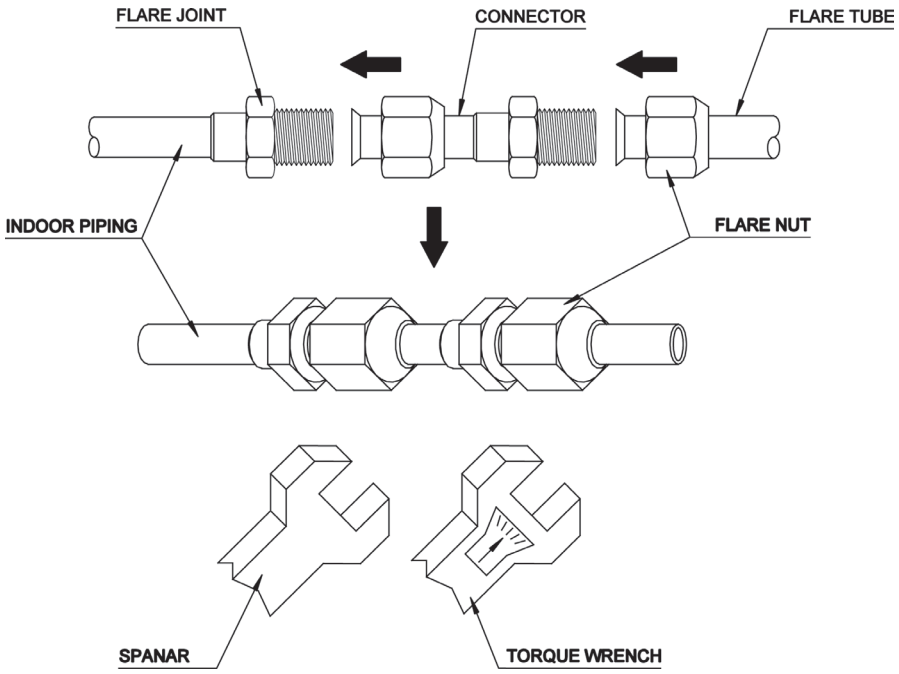
Pipe ∅, D (mm/in)	A (mm)	
	Imperial	Rigid
6.35 / 1/4”	1.3	0.7
9.52 / 3/8”	1.6	1.0
12.70 / 1/2”	1.9	1.3
15.88 / 5/8”	2.2	1.7
19.05 / 3/4”	2.5	2.0



Fix the pipe firmly on the flare die. Match the centers of both the flare die and the flaring punch, and tighten flaring punch fully.

C) Piping Connection To The Units

- Align the center of the piping and tighten the flare nut sufficiently with fingers
- Finally, tighten the flare nut with the torque wrench until the wrench clicks.



10. SPECIAL PRECAUTION FOR R410A

SPECIAL PRECAUTIONS WHEN DEALING WITH REFRIGERANT R410A UNIT

1) WHAT IS NEW REFRIGERANT R410A?

R410A is a new HFC refrigerant which does not damage the ozone layer. The working pressure of this new refrigerant is 1.6 times higher than conventional refrigerant (R22), thus proper installation / servicing is essential.

2) COMPONENTS

Mixture weight composition R32(50%) and R125(50%)

3) CHARACTERISTIC

- R410A liquid and vapor components have different compositions when the fluid evaporates or condenses. Hence, when leak occurs and only vapor leaks out, the composition of the refrigerant mixture left in the system will change and subsequently affect the system performance. **DO NOT** add new refrigerant to leaked system. It is recommended that the system should be evacuated thoroughly before recharging with R410A.
- When refrigerant R410A is used, the composition will differ depending on whether it is in gaseous or liquid phase. Hence when charging R410A, ensure that only liquid is being withdrawn from the cylinder or can. This is to make certain that only original composition of R410A is being charged into the system.
- POE oil is used as lubricant for R410A compressor, which is different from the mineral oil used for R22 compressor. Extra precaution must be taken not to expose the R410A system too long to moist air.

4) CHECK LIST BEFORE INSTALLATION/SERVICING

- Tubing
  Refrigerant R410A is more easily affected by dust of moisture compared with R22, make sure to temporarily cover the ends of the tubing prior to installation
- Compressor oil
  No additional charge of compressor oil is permitted.
- Refrigerant
  No other refrigerant other that R410A
- Tools (size of service port is different from R22 system)
  Tools specifically for R410A only (must not be used for R22 or other refrigerant)
  i) Manifold gauge and charging hose
  ii) Gas leak detector
  iii) Refrigerant cylinder/charging cylinder
  iv) Vacuum pump c/w adapter
  v) Flare tools
  vi) Refrigerant recovery machine

5) HANDLING AND INSTALLATION GUIDELINES

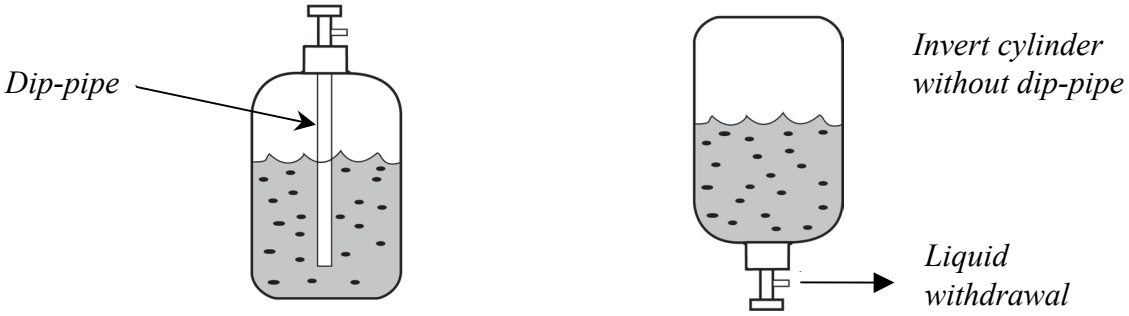
Like R22 system, the handling and installation of R410A system are closely similar. All precautionary measures; such as ensuring no moisture, no dirt or chips in the system, clean brazing using nitrogen, and thorough leak check and vacuuming are equally important requirements. However, due to its hydroscopic POE oil, additional precautions must be taken to ensure optimum and trouble free system operation.

a) During installation or servicing, avoid prolong exposure of the internal part of the refrigerant system to moist air. Residual POE oil in the piping and components can absorb moisture from the air.

b) Ensure that the compressor is not expose to open air for more than the recommended time specified by its manufacturer (typically less than 10 minutes). Removed the seal plugs only when the compressor is about to be brazed.

c) The system should be thoroughly vacuumed to 1.0 Pa (700mmHg) or lower. This vacuuming level is more stringent than R22 system so as to ensure no incompressible gas and moisture in the system.

d) When charging R410A, ensure that only liquid is being withdrawn from the cylinder or can. This is to ensure that only the original composition of R410A is being delivered into the system. The liquid composition can be different from the vapor composition.



f) Normally, the R410A cylinder or can is being equipped with a dip pipe for liquid withdrawal. However, if the dip pipe is not available, invert the cylinder or can so as to withdraw liquid from the valve at the bottom.

11. VACUUMING AND CHARGING

PURGING THE PIPING AND THE INDOOR UNIT

Except for the outdoor unit which is pre-charged with refrigerant, the indoor unit and the refrigerant connection pipes must be air-purged because the air containing moisture that remains in the refrigerant cycle may cause malfunction of the compressor.

- Remove the caps from the valve and the service port.
- Connect the center of the charging gauge to the vacuum pump.
- Connect the charging gauge to the service port of the 3-way valve.
- Start the vacuum pump. Evacuate for approximately 30 minutes. The evacuation time varies with different vacuum pump capacity. Confirm that the charging gauge needle has moved towards -760mmHg.

Caution

- If the gauge needle does not move to -760mmHg, be sure to check for gas leaks (using the refrigerant detector) at flare type connection of the indoor and outdoor unit and repair the leak before proceeding to the next step.
- Close the valve of the charging gauge and stop the vacuum pump.
- On the outdoor unit, open the suction valve (3 way) and liquid valve (2 way) (in anti-clockwise direction) with 4mm key for hexagon sacked screw.

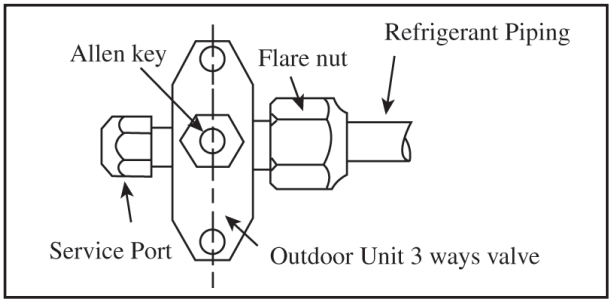
ADDITIONAL CHARGE

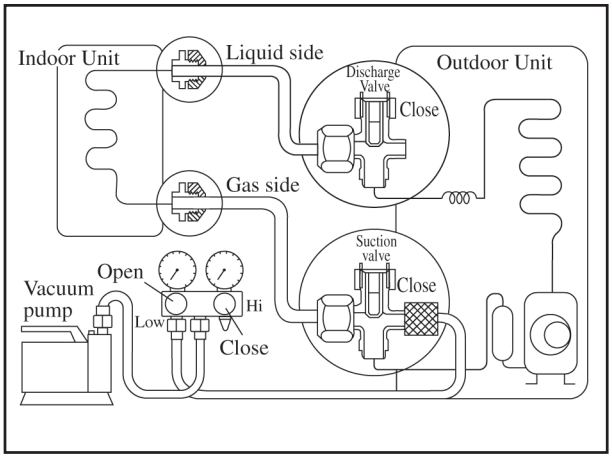
The refrigerant is pre-charged in the outdoor unit. If the piping length is less than 7.62m (25ft), then additional charge after vacuuming is not necessary. If the piping length is more than 7.62m (25ft), then use the additional charge value as indicated in the table.

CHARGE OPERATION

This operation must be done by using a gas cylinder and a precise weighing machine. The additional charge is toppedup into the outdoor unit using the suction valve via the service port.

- Remove the service port cap.
- Connect the low pressure side of the charging gauge to the suction service port center of the cylinder tank and close the high pressure side of the gauge. Purge the air from the service hose.
- Start the air conditioner unit.
- Open the gas cylinder and low pressure charging valve.
- When the required refrigerant quantity is pumped into the unit, close the low pressure side and the gas cylinder valve.
- Disconnect the service hose from service port. Put back the service port cap.

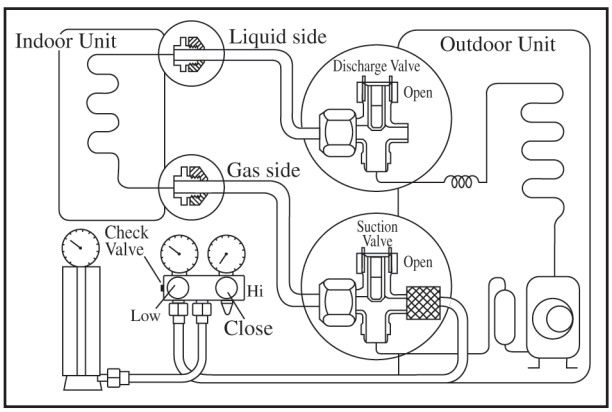




Additional charge per meter

MODEL	R410A
M5WMX 010/015/020/025 GR	19.5 g/m

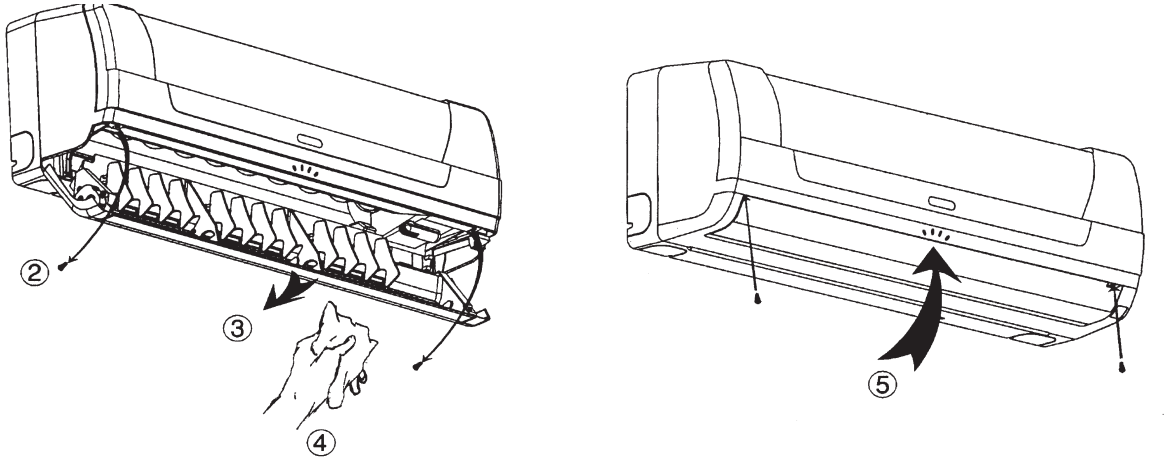
The additional refrigerant charge amount recommended is a guideline for long piping application. The actual charge required may be different from the guideline due to different application and variation in site condition.



Servicing And Maintenance

Warning

- Disconnect from the main power supply before servicing the air conditioner unit.
- DO NOT pull out the power cord when the power is ON. This may cause serious electrical shocks which may result in fire hazards.



① Off the unit
② Unscrew the air discharge housing
③ Flip open the air discharge housing
④ Clean the blower
⑤ Close the air discharge housing and tighten it with screw

Service Parts	Maintenance Procedures	Period
Indoor Air Filters	1.Remove any dust adhering to the filter by using a vacuum cleaner or wash in lukewarm water (below 40ºC/104ºF) with a neutral cleaning detergent. 2.Rinse the filter well and dry before placing it back onto the unit. 3.Do not use gasoline, volatile substances or chemicals to clean the filter	At least once every 2 weeks. More frequently if necessary.
Indoor Unit	1.Clean any dirt or dust on the grille or panel by wiping it with a soft cloth soaked in lukewarm water (below 40ºC/104ºF) and a neutral detergent solution. 2.Do not use gasoline, volatile substances or chemicals to clean the indoor unit.	At least once every 2 weeks. More frequently if necessary.
Condensate Drain Pan and Pipe	1.Check and clean.	Every 3 months.
Indoor Fan	1.Check for unusual noise.	As necessary
Indoor/Outdoor Coil	1.Check and remove dirt which is clogged between fins. 2.Check and remove obstacles which hinder air flow in and out of indoor/outdoor unit.	Every month. Every month.

Service Parts	Maintenance Procedures	Period
Electrical	1.Check voltage, current and wiring. 2.Check faulty contacts caused by loose connections, foreign matters, etc.	Every 2 months Every 2 months
Compressor	1.No maintenance needed if refrigerant circuit remains sealed. However, check for refrigerant leak at joints and fittings.	Every 6 months.
Compressor Lubrication	1.Oil is factory charged. Not necessary to add oil if circuit remains sealed.	No maintenance required.
Fan Motors Lubrication	1.All motors pre-lubricated and sealed at factory.	No maintenance required.

Troubleshooting

When a malfunction of the air conditioner unit is detected, immediately switch off the main power supply before proceeding with the following troubleshooting procedures.
The following are common fault conditions and simple troubleshooting tips. If any other fault conditions which are not listed occur, contact your nearest local dealer. DO NOT attempt to troubleshoot the unit by yourself.

No	Fault conditions	Possible causes / corrective actions
1	The air conditioner unit will not resume after power failure.	• The auto restart function is not functioning. Please turn on the unit with the wireless / wired controller.
2	The compressor does not operate 3 minutes after the air conditioner unit is started.	• Protection against frequent starting. • Wait for 3 or 4 minutes for the compressor to start operating by it self.
3	The airflow is too slow or room cannot be cooled sufficiently.	• The air filter is dirty. • The doors and windows are opened. • The air suction and discharge of both indoor and outdoor units are clogged or blocked. • The regulated temperature or temperature setting is not low enough.
4	Discharge airflow has bad odor.	• Cigarettes, smoke particles, perfume and others, which might have adhered onto the coil, may cause odor. • Contact your nearest dealer.
5	Condensation on the front air grille of the indoor unit.	• This is caused by air humidity after an extended period of operation. • The set temperature is too low. Increase the temperature setting and operate the unit at high fan speed.
6	Water flowing out from the air conditioner.	• Switch off the unit and contact your nearest dealer. This might be due to tilted installation.
7	Hissing airflow sound from the air conditioner unit during operation.	• Liquid refrigerant flowing into the evaporator coil.
8	The wireless controller display is dim.	• The batteries are discharged. • The batteries are not correctly inserted. • The assembly is not good.
9	Compressor operates continuously.	• Dirty air filter. Clean the air filter. • Temperature setting too low (cooling). Use higher temperature setting. • Temperature setting too high (heating), Use lower temperature setting.
10	No cool air comes out during cooling cycle, or no hot air comes out during heating cycle.	• Temperature setting too high (cooling). Use lower temperature setting. • Temperature setting too low (heating). Use higher temperature setting.
11	On heating cycle, warm air does not come out.	• Unit is in defrost mode. Heating operation will resume after defrost cycle ends.

Diagnostic Guidelines

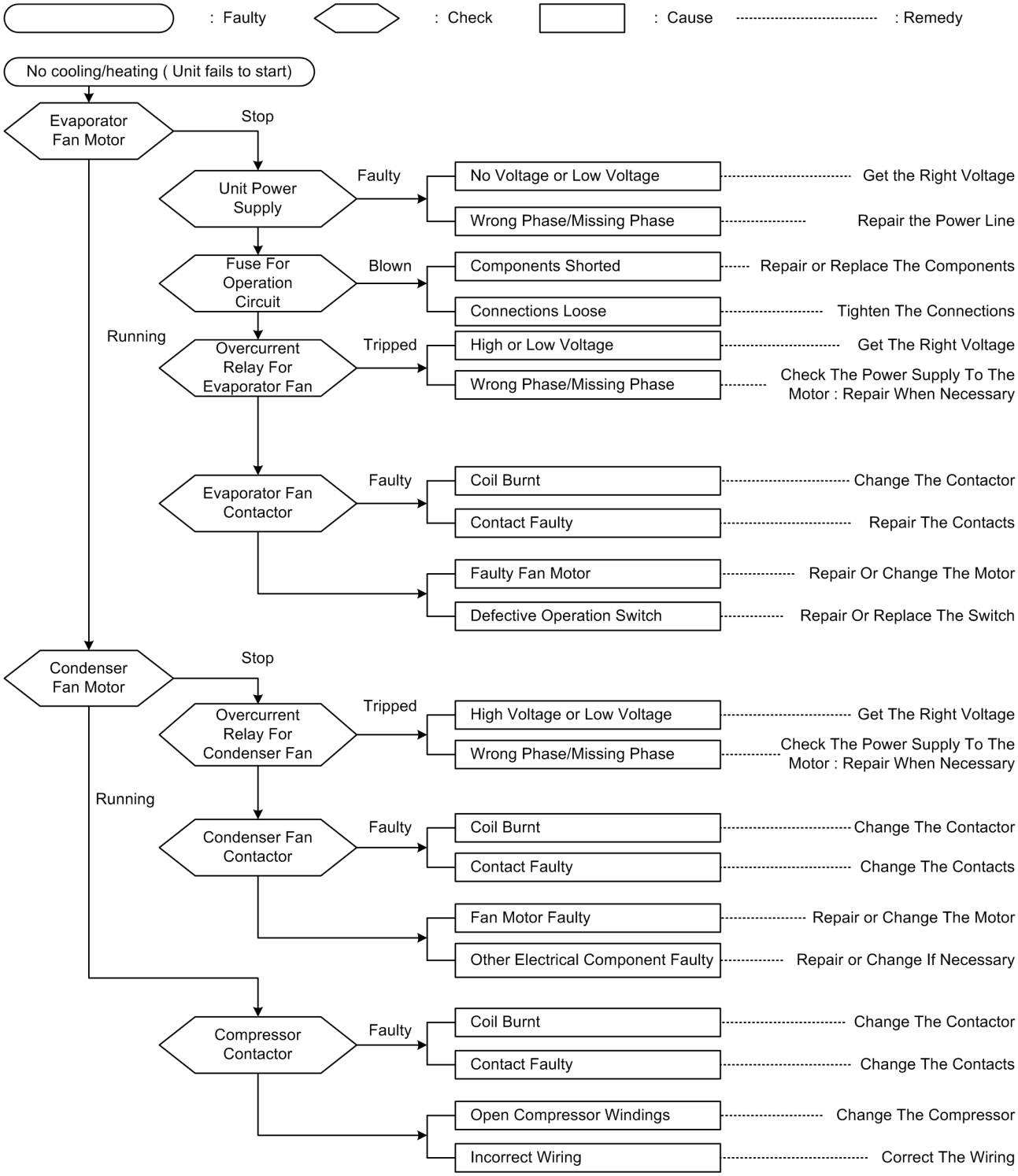
By means of pressure reading:

Data / Circuit	Pressure					Probable cause
	Too low	A little low	Normal	A little high	Too high	
High side **Low side**					● ●	1. Overcharged with refrigerant. 2. Non-condensable gases in refrigerant circuit (e.g. air) 3. Obstructed air-intake / discharge. 4. Hot air short circuiting in outdoor unit.
High side **Low side**	●				●	1. Poor compression / no compression (compressor defective) 2. Reversing valve leaking.
High side **Low side**	●	●				1. Undercharged with refrigerant. 2. Refrigerant leakage. 3. Air filter clogged / dirty (indoor unit). 4. Indoor fan locked / seized. 5. Defective defrost control, outdoor coil freeze up (heating). 6. Outdoor fan locked / seized (heating).
High side **Low side**				●	●	1. Outdoor fan blocked (cooling). 2. Outdoor coil dirty (cooling). 3. Indoor fan locked / seized (heating). 4. Indoor air filter clogged / dirty (heating). 5. Non-condensable gases in refrigerant circuit (e.g. air)
High side **Low side**				●	●	1. Air intake temperature of indoor unit too high.

By means of diagnostic flow chart:

Generally, there are two kinds of problems, i.e. starting failure and insufficient cooling/heating. “Starting failure” is caused by electrical defect while improper application or defects in refrigerant circuit causes “Insufficient cooling / heating”.

i) Diagnosis of Electric Circuit

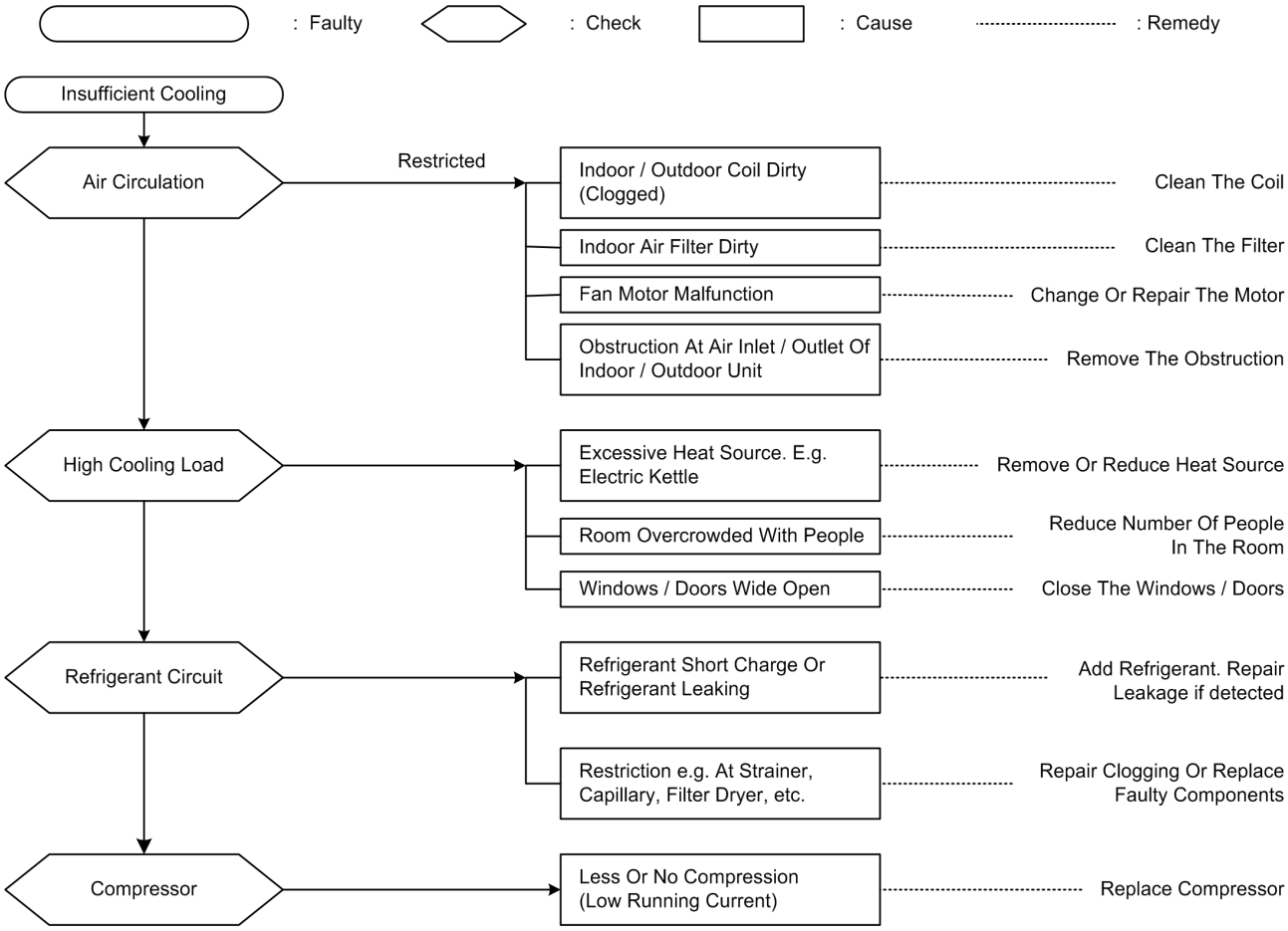


The most common causes of air conditioner failure to “start” are :

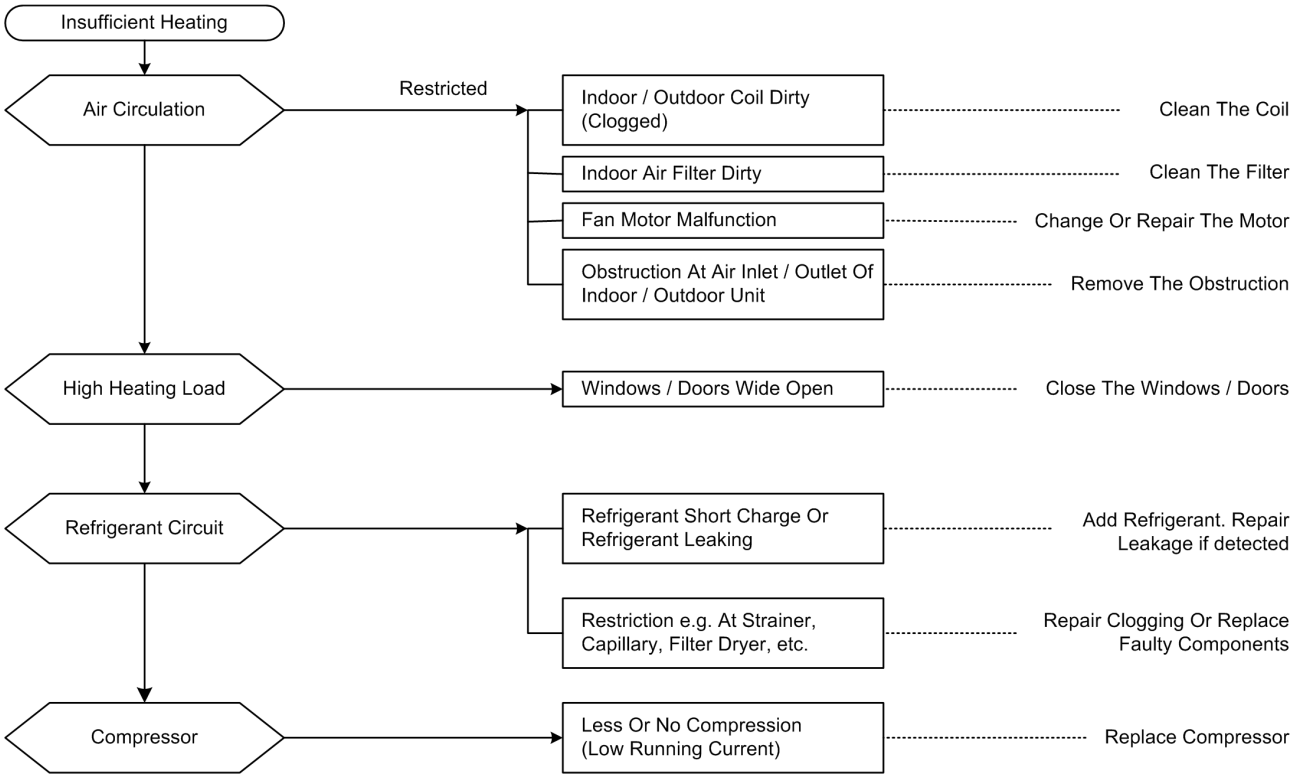
a) Voltage not within ±10% of rated voltage.
b) Power supply interrupted.
c) Improper control settings.
d) Air conditioner is disconnected from main power source.
e) Fuse blown or circuit breaker off.

ii) Diagnosis of Refrigerant Circuit / Application

There might be some causes where the unit starts running but does not perform satisfactorily, i.e. insufficient cooling. Judgement could be made by measuring temperature difference of indoor unit's intake and discharge air as well as running current.


: Faulty
: Check
: Cause
: Remedy
Insufficient Cooling
Air Circulation
Restricted
Indoor / Outdoor Coil Dirty (Clogged)
Clean The Coil
Indoor Air Filter Dirty
Clean The Filter
Fan Motor Malfunction
Change Or Repair The Motor
Obstruction At Air Inlet / Outlet Of Indoor / Outdoor Unit
Remove The Obstruction
High Cooling Load
Excessive Heat Source. E.g. Electric Kettle
Remove Or Reduce Heat Source
Room Overcrowded With People
Reduce Number Of People In The Room
Windows / Doors Wide Open
Close The Windows / Doors
Refrigerant Circuit
Refrigerant Short Charge Or Refrigerant Leaking
Add Refrigerant. Repair Leakage if detected
Restriction e.g. At Strainer, Capillary, Filter Dryer, etc.
Repair Clogging Or Replace Faulty Components
Compressor
Less Or No Compression (Low Running Current)
Replace Compressor

Satisfactory operation with temperature difference of air intake & discharge of indoor unit 8°C to 13°C. *
(* value is for reference only)


Insufficient Heating
Air Circulation
Restricted
Indoor / Outdoor Coil Dirty (Clogged)
Clean The Coil
Indoor Air Filter Dirty
Clean The Filter
Fan Motor Malfunction
Change Or Repair The Motor
Obstruction At Air Inlet / Outlet Of Indoor / Outdoor Unit
Remove The Obstruction
High Heating Load
Windows / Doors Wide Open
Close The Windows / Doors
Refrigerant Circuit
Refrigerant Short Charge Or Refrigerant Leaking
Add Refrigerant. Repair Leakage if detected
Restriction e.g. At Strainer, Capillary, Filter Dryer, etc.
Repair Clogging Or Replace Faulty Components
Compressor
Less Or No Compression (Low Running Current)
Replace Compressor

Satisfactory operation with temperature difference of air intake & discharge of indoor unit 14°C to 20°C. *
(* value is for reference only)

INDICATOR LIGHTS

IR SIGNAL RECEIVER

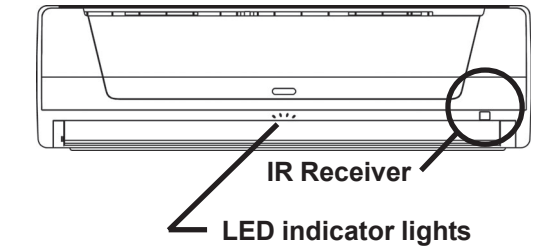
When there is infrared remote control operating signal, the signal receiver on indoor unit will made a (beep) for signal acceptance confirmation.

COOLING / HEATPUMP UNIT

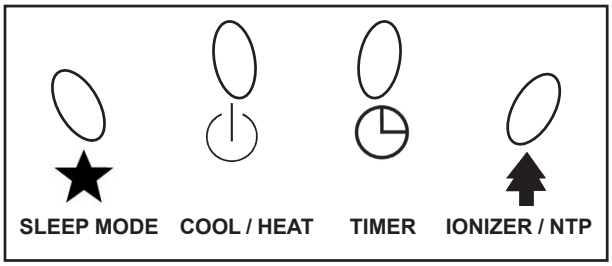
The table below shows the LED indicator light for air conditioner unit under normal operation and fault condition. The LED indicator lights are located at the middle of the air conditioner unit.

The heat pump units is equipped with an “auto” mode, whereby the unit will provide reasonable room temperature by switching the unit automatically to either “cool” mode or “heat” mode, according to the temperature setting set by the user.

Inverter Unit



LED INDICATOR LIGHTS FOR COOLING UNIT / HEATPUMP UNIT



LED INDICATOR LIGHTS : NORMAL OPERATION AND FAULTY CONDITIONS FOR COOLING / HEATPUMP UNIT

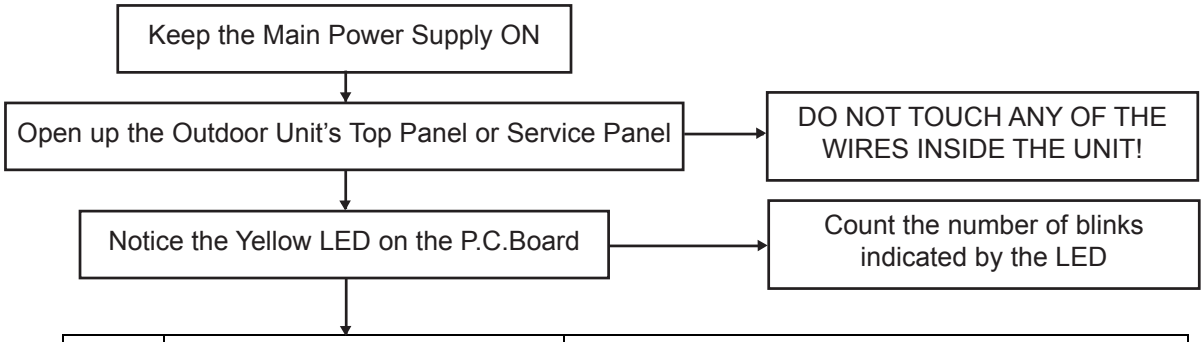
★	⏻ COOL/HEAT (GREEN/RED)	◷	⇑	Normal Operation / Fault Indication	Action
○/●	○ Green		○/●	Cool mode	-
○/●	○ Red		○/●	Heat mode	-
○/●	○ Orange		○/●	Auto mode in cooling/heating operation	-
	○	○		Timer on	-
○	○			Sleep mode on	-
	○		○	Ionizer on	-
	○		○/●	Fan mode on	-
	○		○/●	Dry mode on	-
	◑ Red			Defrost operation	-
	◑ Green			Indoor temperature sensor loose / short	Call your dealer
		◑		Coil temperature sensor loose / short	Call your dealer
			◑	Outdoor temperature sensor loose / short	Call your dealer
◑	◑ Green			Compressor overload protection	Call your dealer
	◑ Green		◑	IPM / PFC error	Call your dealer
		◑	◑	Outdoor total current trip / DC peak	Call your dealer
◑			◑	Compressor overheat / gas leak	Call your dealer
	◑ Green	◑		Indoor fan feedback error	Call your dealer
◑		◑		Communication error between indoor and outdoor	Call your dealer

○ - ON ○/● - ON or OFF ◑ - Blinking

1

Compressor Stopped Troubleshooting Instructions

(Applicable to Inverter System Only)


Keep the Main Power Supply ON
Open up the Outdoor Unit's Top Panel or Service Panel
DO NOT TOUCH ANY OF THE WIRES INSIDE THE UNIT!
Notice the Yellow LED on the P.C.Board
Count the number of blinks indicated by the LED

Blink	Fault Indication	Corrective Action
1	OutdoorAmbient Sensor Error	Check ambient sensor wire and connection
2	Outdoor Coil Sensor Error	Check coil sensor wire and connection
3	Outdoor Discharge Sensor Error / Compressor Overheat Indication	Check discharge sensor wire and connection / Not enough refrigerant / Indoor overload / Outdoor fan not functioning
4	DC Compressor Feedback	Call local dealer
5	Communication Error	Check Interconnection communication wire
6	Over Current	Call local dealer
7	No Load	Check compressor wire and connection
8	Over / UnderVoltage	Check power supply
9	DC Compressor Start Failure	Call local dealer
10	Cooling Overload	Check whether outdoor unit is blocked or not
11	Defrost	Wait till defrost is over then restart
12	IPM Protection	Check IPM
13	EEPROM Read Error	Change EEPROM
14	EEPROM Write Error	Change EEPROM
15	DC Fan Motor Feedback Error	Check fan motor wire connection
16	AC Peak Current Error	Call local dealer
17	Outdoor Suction Sensor Error	Check suction sensor wire and connection
19	DC Compressor Speed Control Error	Call local dealer
21	Outdoor Suction A Sensor Error	Check A suction sensor wire and connection
22	Outdoor Suction B Sensor Error	Check B suction sensor wire and connection
23	Outdoor Suction C Sensor Error	Check C suction sensor wire and connection
24	Outdoor Suction D Sensor Error	Check D suction sensor wire and connection
31	Indoor A Communication Error	Check Interconnection communication wire to Indoor A
32	Indoor B Communication Error	Check Interconnection communication wire to Indoor B
33	Indoor C Communication Error	Check Interconnection communication wire to Indoor C
34	Indoor D Communication Error	Check Interconnection communication wire to Indoor D

***If the problem persist, contact your local dealer straight away**

2

Normal Running Mode Condition

(Applicable to Inverter System Only)

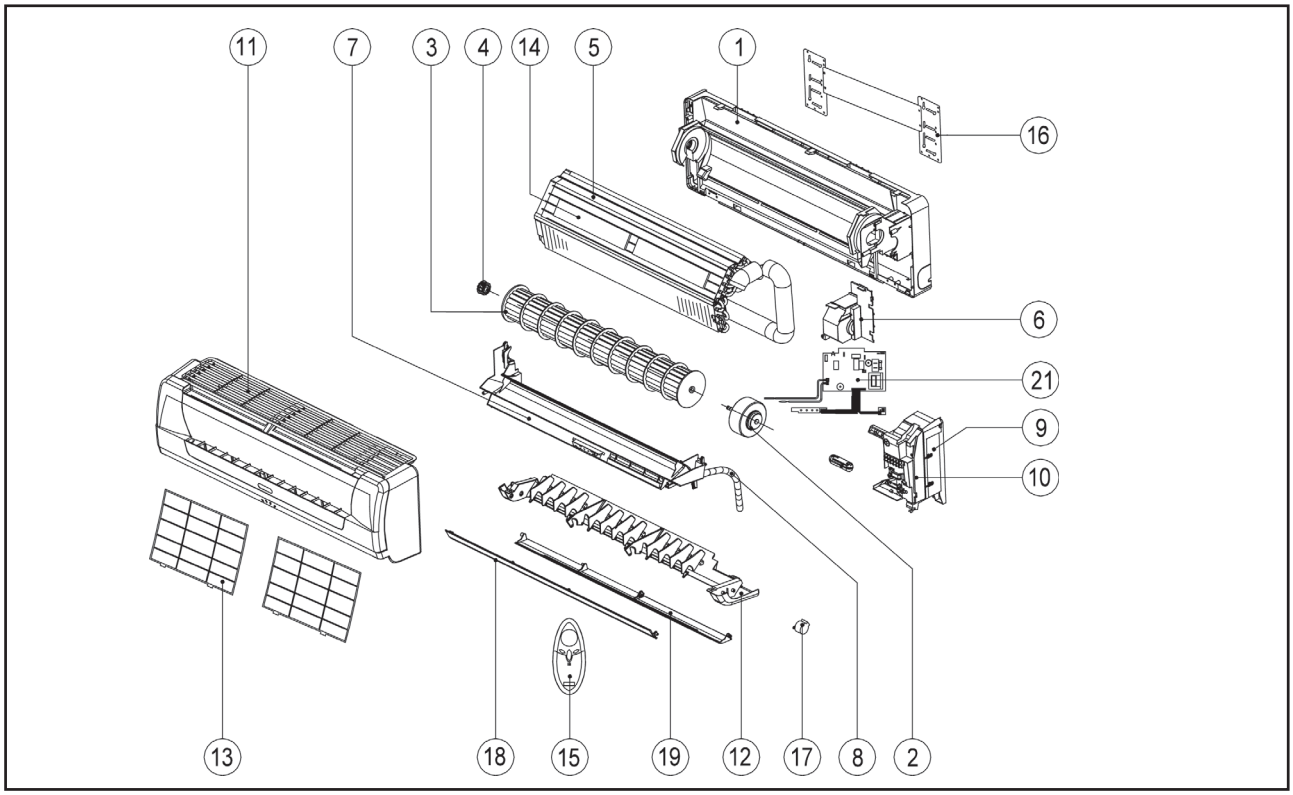
If the air conditioner unit has no faulty indications and the compressor is running at normal mode, the outdoor P.C.Board's LED indication will blink at a slower paste. The table below shows the significant meaning of different running mode and limitation for this air conditioner unit.

One must not attempt to see the LED indication blinking unless instructed to do so.

Blinks	Blinking Indication
1	Normal Running, with no limitation
2	Voltage Limit
3	Cooling unit : Outdoor Coil Temperature Limit
4	Total Current Limit
5	Discharge Temperature Limit
6	Cooling unit : Indoor Coil Temperature Limit
7	Indoor Fan Control
8	Outdoor Frequency Adjustment

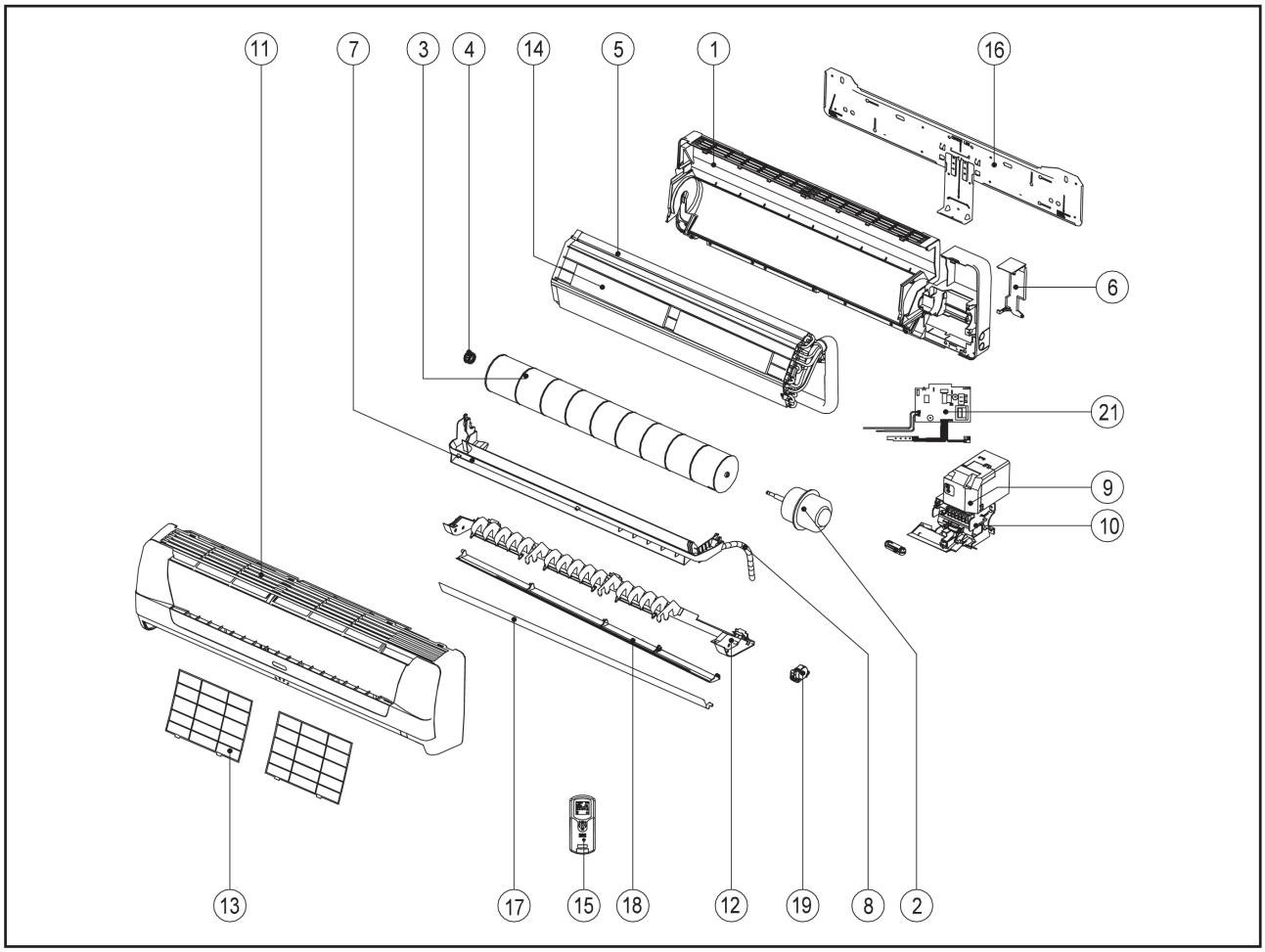
Exploded View And Parts List

MODEL : M5WMX 010GR/015GR



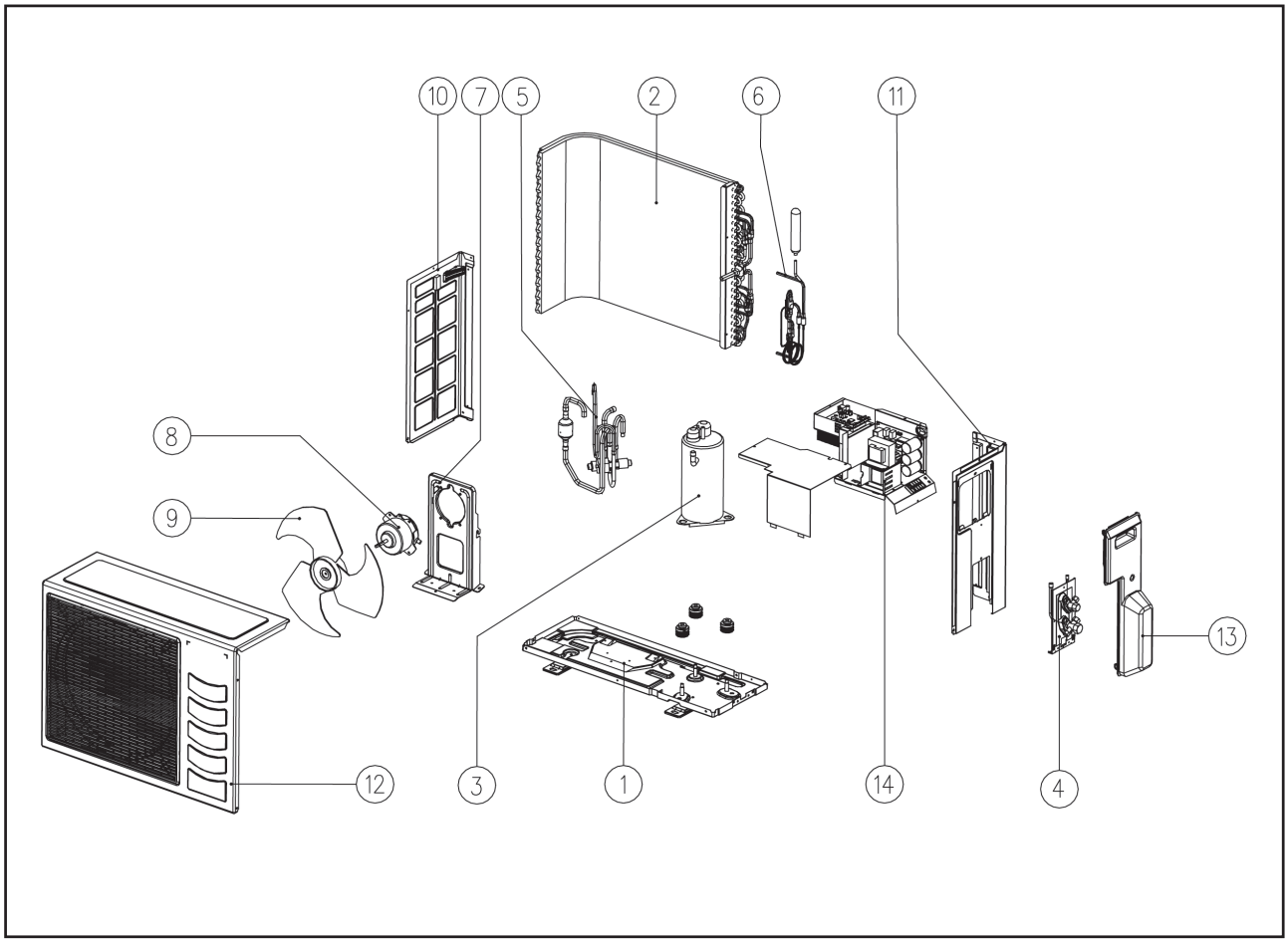
No.	Description	Part Number	Related Nomenclature			
			M5WMX010GR		M5WMX015GR	
			Ionizer	NTP	Ionizer	NTP
1	ASSY, CHASSIS 10/15G	A50124064151	✓	✓	✓	✓
2	MOTOR, MWMX10/15G-501-WL 17W WELLING	A03039022520	✓	✓	✓	✓
3	BLOWER CROSS FLOW WM10/15G G97-717.5	A03029019461	✓	✓	✓	✓
4	FAN BUSH C/FLOW BLACK	A11014029514	✓	✓	✓	✓
5	ASSY. INDOOR COIL					
	ASSY, INDOOR COIL - WM10GR	A50024064225	✓	✓	-	-
	ASSY, INDOOR COIL - WM15GR	A50024066054	-	-	✓	✓
6	PIPING CLAMP	A12014060544	✓	✓	✓	✓
7	ASSY, DRAIN PAN 10/15G	A50124064152	✓	✓	✓	✓
8	DRAIN HOSE WM10/15(600mmL)	A10024018204	✓	✓	✓	✓
9	ASSY, CONTROL BOX COVER (AP)	A50124074815	✓	✓	✓	✓
10	ASSY, CONTROL BOX					
	ASSY, CONTROL BOX 10GR-IONIZER	A50044074471	✓	-	-	-
	ASSY, CONTROL BOX 10GR-NTP	A50044074475	-	✓	-	-
	ASSY, CONTROL BOX 15GR-IONIZER	A50044074472	-	-	✓	-
	ASSY, CONTROL BOX 15GR-NTP	A50044074476	-	-	-	✓
11	ASSY,F/COVER-A	A50124074449	✓	✓	✓	✓
12	ASSY, AIR DISCHARGE 10/15	A50124062326	✓	✓	✓	✓
13	FILTER 10/15G	A12014062321	✓	✓	✓	✓
14	FILTER ANTI MICROBIAL	A03089019984	✓	✓	✓	✓
	AIR FILTER, t5x248x43mm (Titanium Oxide)	A03089015250	✓	✓	✓	✓
15	HANDSET, WIRELESS G11 AP MCQUAY	A04084067314	✓	✓	✓	✓
16	ASSY, MOUNTING PLATE 10/15G	A50014062324	✓	✓	✓	✓
17	MOTOR, AIR SWING WM10/15G	A03039021375	✓	✓	✓	✓
18	LOUVER TOP 10/15G	A12014061363	✓	✓	✓	✓
19	LOUVER BOTTOM 10/15G	A12014061364	✓	✓	✓	✓
Parts not shown in diagram						
	STICKER, LOGO WMG MCQUAY	A08024066868	✓	✓	✓	✓

MODEL : M5WMX 020GR/025GR



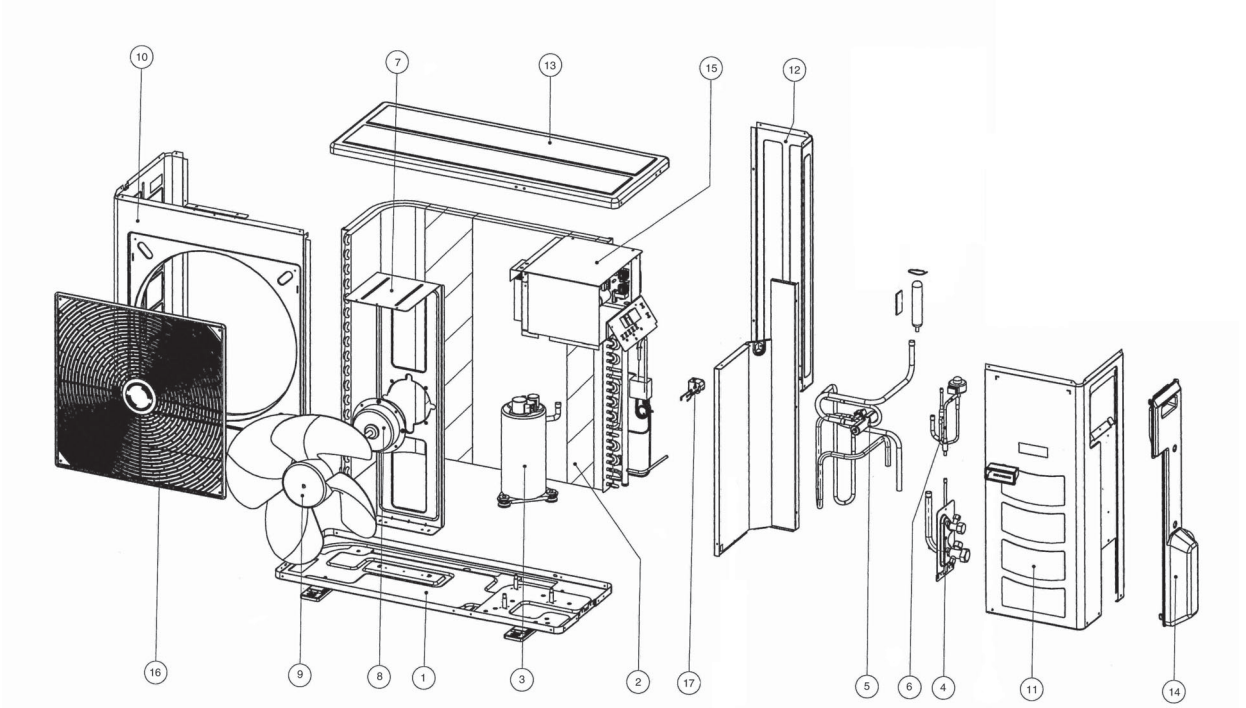
No.	Description	Part Number	Related Nomenclature			
			M5WMX020GR		M5WMX025GR	
			Ionizer	NTP	Ionizer	NTP
1	ASSY, CHASSIS 10/15G	A50124068170	✓	✓	✓	✓
2	ASSY, FAN MOTOR 20/25G	A50034074747	✓	✓	✓	✓
3	FAN CROSS FLOW, WM20/25F	A03019007388	✓	✓	✓	✓
4	FAN BUSH C/FLOW GREY	A11014023775	✓	✓	✓	✓
5	*ASSY, COIL WM20G/GR / 5WM25G/GR*	A50024072203	✓	✓	✓	✓
6	CLAMP, PIPING 20/25G	A12014071297	✓	✓	✓	✓
7	ASSY, DRAIN PAN 20/25G	A50124068171	✓	✓	✓	✓
8	DRAIN HOSE ASSY WM20C/25C(700mmL)	A10024015319	✓	✓	✓	✓
9	ASSY., CONTROL BOX COVER	A50124074814	✓	✓	✓	✓
10	ASSY, CONTROL BOX					
	ASSY, CONTROL BOX 20GR (IONIZER)	A50044074736	✓	-	-	-
	ASSY, CONTROL BOX 20GR (NTP)	A50044074740	-	✓	-	-
	ASSY, CONTROL BOX 25GR (IONIZER)	A50044074737	-	-	✓	-
	ASSY, CONTROL BOX 25GR (NTP)	A50044074741	-	-	-	✓
11	ASSY,F/COVER-A	A50124074743	✓	✓	✓	✓
12	ASSY, AIR DISCHARGE 20/25G	A50124071426	✓	✓	✓	✓
13	FILTER 20/25G	A12014066832	✓	✓	✓	✓
14	FILTER ANTI MICROBIAL	A03089019984	✓	✓	✓	✓
	AIR FILTER, t5x248x43mm (Titanium Oxide)	A03089015250	✓	✓	✓	✓
15	HANDSET, WIRELESS G11EC W/IONIZER MCQUAY	A04084065334	✓	✓	✓	✓
16	ASSY, MTG PLATE WM20/25F	A50014036133	✓	✓	✓	✓
17	LOUVER, TOP 20/25G	A12014066820	✓	✓	✓	✓
18	LOUVER, BOTTOM 20/25G	A12014066821	✓	✓	✓	✓
19	MOTOR, MP35 WM20/25G	A03039022933	✓	✓	✓	✓
Parts not showed in diagram						
	STICKER, LOGO MCQUAY (GRILLE A)	A08024066868	✓	✓	✓	✓

MODEL : M5LCX 010CR/015CR



No.	Description	Part Number	Related Model	
			M5LCX 010CR	M5LCX 015CR
1	ASSY. BASE PAN	A50014057190	✓	✓
2	ASSY, COIL			
	ASSY, OUTDOOR COIL (5SLX 10CR)	A50024082783	✓	-
	ASSY, OUTER COIL (5SLX 15CR)	A50024082784	-	✓
3	COMPRESSOR, ASSY 5CS102XEB MATSUSHITA	A50049015857	✓	✓
4	VALVE,BRACKET	A01014051164	✓	✓
	VALVE, FLARE 2 WAY BRASS 1/4" (R-410A)	A05019016887	✓	✓
	VALVE, FLARE 3 WAY BRASS 3/8" (R-410A)	A05019016888	✓	-
	VALVE, FLARE 3 WAY BRASS 1/2" (R-410A)	A05019016889	-	✓
5	VALVE, REV 4 WAY SHF-7H-34U(RK) SHANHUA	A05019016937	✓	✓
6	ASSY, CAP TUBE			
	ASSY, CAP TUBE (5SLX10CR NEW)	A50024078331	✓	-
	ASSY, CAP TUBE (5SLX15CR NEW)	A50024078332	-	✓
7	BRACKET,FAN MOTOR (SL10C/15C)	A01014051162	✓	✓
8	FAN MOTOR			
	MOTOR,M5SLX10CR-501-BOM	A03039016892	✓	-
	MOTOR, M5SLX15CR-501-BOM	A03039016893	-	✓
9	FAN PROPELLER, DIA401.0 OZ42000 SHUNDE	A03019015339	✓	✓
10	PANEL,LEFT (SL10C/15C)	A01014051166	✓	✓
11	PANEL,RIGHT (SL10C/15C)	A01014051167	✓	✓
12	PANEL,TOP/FRONT SL10/15C	A01014051171	✓	✓
	ASSY,FRONT GRILLE (SL10C/15C)	A50124056700	✓	✓
13	ASSY,VALVE COVER SL10C/15(R)	A50124051173	✓	✓
14	ASSY, CONTROL BOX			
	ASSY, CONTROL BOX (5SLX 10CR)	A50044061024	✓	-
	ASSY, CONTROL BOX (5SLX 15CR)	A50044061025	-	✓

MODEL : M5LCX 020CR/025CR



No.	Description	Part Number	Related Model	
			M5LCX 020CR	M5LCX 025CR
1	ASSY, BASE PAN (5SLX20/25CR)	A50014073830	✓	✓
2	ASSY, OUTDOOR COIL (5SLX20/25CR)	A50024073384	✓	✓
3	COMPRESSOR, 5CS130XCC03 MATSUSHITA	A04019024263	✓	✓
4	ASSY, VALVE BRACKET (5SLX 20CR)	A50014073839	✓	-
	ASSY, VALVE BRACKET (5SLX 25CR)	A50014073840	-	✓
	ASSY., 3 WAYS VALVE 1/2"	A50059022809	✓	-
	ASSY., 3 WAYS VALVE 5/8"	A50059022810	-	✓
	ASSY., 2 WAYS VALVE 1/4"	A50059022811	✓	✓
5	VALVE, REV 4 WAY SHF-7H-34U(RK) SHANHUA	A05019016937	✓	✓
6	ASSY., EXV (5SLX 20CR/25CR)	A50024077293	✓	✓
7	BRACKET MOTOR (SL25C/28C/CR)	A01014070948	✓	✓
8	FAN MOTOR			
	MOTOR, M5MSX20AR-501-K 64W KUSATSU	A03039024770	✓	-
	MOTOR, M5SLX25CR-501-K 94W KUSATSU	A03039024771	-	✓
9	FAN PROPELLER, Ø460 0Z40700 SUNWILL CHIN	A03019023393	✓	✓
10	PANEL FRONT / LEFT	A01014070947	✓	✓
11	PANEL SERVICE (SL25C/28C/CR)	A01014070949	✓	✓
12	PANEL RIGHT BACK (SL25C/28C/CR)	A01014070950	✓	✓
13	PANEL TOP (SL20C/25C/28C/CR)	A01014070596	✓	✓
14	ASSY VALVE COVER (SL25C/28C/CR)	A50124073905	✓	✓
15	ASSY, CONTROL BOX			
	ASSY, CONTROL BOX (5SLX 20CR)	A50044078974	✓	-
	ASSY, CONTROL BOX (5SLX 25CR)	A50044078975	-	✓
16	ASSY FRONT GRILLE (SL20C/25C/28C/CR)	A50124072880	✓	✓
17	SOLENOID COIL, QA(L)12OYL02RK(E) 900B SH	A04059022076	✓	✓

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